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ABSTRACT

The project described was conducted to study how young children proceed to the acquisition of mastery in making films, how teaching technique is related to these forms of mastery, and what perceptual, cognitive, and affective changes occur in children as a result of these experiences. The development of a methodology for the study and problems encountered are reviewed, and a case study of Rose--one of the pupils in the study--and descriptions of the other pupils involved and their films are provided. The training film and animation study method used are described, followed by descriptions of the animation study in terms of narrative code, multiple codes of film making, and film as the meeting place of multiple codes. The workshop, content of the workshop films, and coding of film techniques are discussed. Factor analyses of the film techniques are reported, as well as psychological measures used and the children's reactions to film making. Conclusions are concerned with the evaluation of young filmmakers, issues in child film making, history of film making, social scientific analysis, formal characteristics of children's film, and aesthetics of children's film making. A bibliography and a list of the films produced at the workshop are also provided. (CHC)

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A DEVELOPMENTAL PSYCHOLOGY OF CHILDREN'S FILM MAKING

Report to Ford Foundation

June 1979

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TABLE OF CONTENTS

ACKNOWLEDGMENTS i

TABLE OF CONTENTS iii

LIST OF TABLES vii

LIST OF FIGURES ix

CHAPTER I. INTRODUCTION 1

CHAPTER II. ROSE: A CASE STUDY IN FILM MAKING 13

- A Case Study: Rose G 18
- Analysis of Rose's Film 61
- Interview 65

CHAPTER III. WHAT HAPPENED TO EVERYONE ELSE AT P.S. 3? 69

- The Other Films 70
  1. Robin K (8 Years) 70
  2. Jessica R (7 Years) 72
  3. Jason B (7 Years) 73
  4. Larry O 80
  5. Marion R (8 Years) 83
  6. Pam W (7 Years) 83
  - Summary 84
- The Drop-Outs 84
  1. Gender 84
  2. The Crisis Day 85
  3. Related Characteristics 89
- Conclusion 91

CHAPTER IV. THE TRAINING FILM AND THE ANIMATION STUDY 102

- The Training Film 102
- The Animation Study 115
  - Method 117

CHAPTER V. THE ANIMATION STUDY: THE NARRATIVE CODE 119

1. The 5-6 Year Olds: Lack of Narrative Control 128
2. The 7-8 Year Olds: Dominance of Narrative 130
3. The Preadolescents, 9-11 Year Olds: Film as Representation . . . 133
4. 12-15 Year Olds: Film as Communication 135

- Content of Film Stories 137
- Object Use in Narrative 138

CHAPTER VI. THE ANIMATION STUDY: THE MULTIPLE CODES OF FILM MAKING . . . 140

Code 2. The Manipulation of Objects 142
1. The 5-6 Year Olds 142
2. The 7-8 Year Olds 143
3. The 9-11 Year Olds 143
4. The 12-15 Year Olds 145
Code 3. The Differentiation of Space 145
1. The 5-6 Year Olds 146
2. The 7-8 Year Olds 148
3. The 9-11 Year Olds 149
4. The 12-15 Year Olds 149
Code 4. The Movement of Objects 151
1. The 5-6 Year Olds 154
2. The 7-8 Year Olds 156
3. The 9-11 Year Olds 156
4. The 12-15 Year Olds 158
Code 5. Film Technique 162
1. The 5-6 Year Olds 164
2. The 7-8 Year Olds 166
3. The 9-11 Year Olds 170
4. The 12-15 Year Olds 173

CHAPTER VII. THE ANIMATION STUDY: FILM AS THE MEETING PLACE OF MULTIPLE CODES 181

Interrelationship of Technique and Other Codes 181
Film As a Meeting Place of Codes 186
1. The 5-6 Year Olds 194
2. The 7-8 Year Olds 196
3. The 9-11 Year Olds 198
4. The 12-15 Year Olds 200
Conclusion to the Animation Study (Chapters IV-VII) 202

CHAPTER VIII. THE WORKSHOP 206

Workshop I: Ongoing Processes 211
The Teachers 212
The Researchers 215
The Children 218
The Film Making Process 247
Bibliography for Chapter VIII 249e

CHAPTER IX. THE CONTENT OF THE WORKSHOP FILMS 250

Introduction 250
Group I 251
Group II 252
Group III 262
Group IV 265

Group V 273
Group VI 277
Conclusions 284

CHAPTER X. CODING THE FILM TECHNIQUES USED AT THE WORKSHOP 286

The Sample 294
Film Technique Code Definitions 300
Methods of Computing Reliability Data for Film Technique Codes . . . 308
Other Potentially Codable Technical Aspects of Film 312
Summary 314

CHAPTER XI. FACTOR ANALYSES OF FILM TECHNIQUES 316

I. Factor Analytic Techniques 316
II. Factor Analytic Results 329
III. Analyses of Variance, Covariance, and Multiple Regression . . . 335
  A. Workshop Effects 338
  B. Age Effects 340
  C. Sex Effects 341
  D. Experience Effects 342
  E. Film Maker Effects 347
  F. Style of Technique 347
Discussion of Style Variables 348
  A. A Preference for Parallel Construction Versus Serial Plot Development 349
  B. A Consistency of Length of Films Produced 350
  C. High Versus Low Camera Angle Preference 350
  D. A Preference for Many Versus Few Locations 351
  E. A Preference for Interior Versus Exterior Locations 351
  F. A Preference for Master Shots 352
  G. Close Versus Far Distances 352
Conclusions 353

CHAPTER XII. PSYCHOLOGICAL MEASURES 355

Results 358
Conclusion 364

CHAPTER XIII. CHILDREN'S REACTIONS TO FILM MAKING 366

George N 366
David M 375
Danny D 377
Richard S 379
Jimmy L 382
Sid M 384
John N 385
Jimmy R 386
Dolores S 388

CHAPTER XIV. CONCLUSIONS 391

- I. Evaluation of Young Filmmakers 391
- II. Issues in Child Film Making 395
- III. The History of Film Making 398
  - A. Film History and Child Development 398
  - B. Mass Media and Stereotyped Film Technique 402
- IV. Social Scientific Analysis 405
  - A. The Culture of the Teachers and the Children 405
  - B. The Specific Settings 406
  - C. The Psychology of the Film Maker 407
  - D. Psychological Impact of Film Making Experience 410
  - E. Children's Reactions to Film Experience 411
- V. Formal Characteristics of Children's Film 412
  - A. Content 412
  - B. Narrative 412
  - C. Images 414
  - D. Technical 414
  - E. Coordination of Codes 415
- VI. Aesthetics of Children's Film Making 415
  - A. Creativity 415
  - B. A Childish Aesthetic 416
- Conclusion 418

BIBLIOGRAPHY 420

APPENDICES 428

- Appendix A. Films Produced at the Young Filmmakers Super-8 Workshop . 428
  - Part I: 1969 Through Spring 1974 428
  - Part II: Fall 1974 Through Spring 1976 436

LIST OF TABLES

Table #

1 Developmental Shifts in the Use of Narrative Elements in Animation Films . . . 127
2 Film Content, Males and Females . . . 137
3 Film Object Use, Males and Females . . . 138
4 Use of Markers, Props and Time . . . 143
5 Spatial Differentiations . . . 146
6 Movement Pathways . . . 153
7 Movement Strategies . . . 153
8 Techniques Taught . . . 164
9 Spontaneous Techniques . . . 164
10 Use of Techniques: An Hierarchy of Strategies . . . 182
11 Proportions of Total Lower East Side Population and of Ten- to Sixteen-Year Olds in 1970, and of Children Attending the 1974-1976 Workshop By Racial/Ethnic Group . . . 224
12 Number and Percentage of Children Achieving Various Stages in Film Making by Period, Sex, and Age . . . 226
13 Family Structure Data by Ethnic/Racial Group and Sex (Number of Children in Workshop Population) . . . 238
14 Group II Films . . . 253
15 Group II Films Made in Central Park . . . 253
16 Group III Films . . . 263
17 Group IV Films . . . 266
18 Group V Films . . . 273
19 Workshop Films . . . 287
20 Distribution of Film Sample by Age, Sex, Period of Attendance and Film Maker Status . . . 297
21 Distribution of Film Sample by Age, Ethnic Group and Sex . . . 297
22 Summary of Film Technique Reliability Data . . . 309
23 42-Variable Factors: Lack of Control Versus Sophisticated Film Making . . . 318
24 42-Variable Factors: Long Films with Long Shots Versus Closer Shots and Shorter Films . . . 319
25 42-Variable Factors: Sophisticated Planning and Editing Technique Versus Unsophisticated Camera . . . 320
26 42-Variable Factors: Medium Low and Angle Variability and Parallel Construction . . . 321
27 42-Variable Factors: Multiple Indoor Scenes Versus Unsophisticated Outdoor Films . . . 322
28 42-Variable Factors: Primitive Films With High Angles . . . 323
29 42-Variable Factors: Music on Primitive High Angle Films Versus More Sophisticated Sound . . . 324
30 42-Variable Factors: Sound Effects and Horizontal Shots . . . 325
31 42-Variable Factors: Special Effects Versus Unsophisticated Films . . . 326

32 42-Variable Factors: Detail Communication Via Image Versus Voice 327
33 42-Variable Factors: Simple Sound Versus Multiple Indoor Locations with Medium Close-ups 328
34 Summary of Factors Produced from the Film Technique Analysis . . 330
35 Films Most Typifying Each Factor Positively and Negatively . . . 334
36 Film Loadings on Factors 336
37 Comparison of Workshops (Rivington Versus Ludlow-Henry) 339
38 Age Contrasts 341
39 A Comparison of Films in Terms of Experience in Film Making . . 342
40 Factor Changes From Early to Late Films 343
41 Changes Due to Number of Films That Were Made Between the First and the Last 344
42 Number of Months Between First and Last Film 345
43 Mean Factor Change for Those Who Made Many Films 345
44 Changes in Specific Age Groups 346
45 Sex Differences in Age Change Scores 346
46 Differences Between Those Who Made Only One Film and Dropped Out Versus Those Who Made Several Films 347
47 Styles in Film Making 348
48 Number of Significant Effects in Comparisons of Classes of Independent Variables 353
49 Pre-Test Data for Psychological Measures for Total Sample, and By Sex and Racial/Ethnic Group (Years Combined) 359
50 Pre-Test Data for Psychological Measures By Drop-outs, Experience and Film Maker Status (Years Combined) . 362
51 Film Titles at the Workshop 413

LIST OF FIGURES

Figure #

1 Film Teachers Chart of Film Making Activities 5
2 Rose's Final Shot List 25
3 Rose's Amended Shot List . . . . 4[illegible]
4 Narrative Levels (Botvin) 120
5 Narrative Levels in Story and Film 121
6 Story and Film Translation of a Six-Year-Old Female 129
7 Intersection of Systems: Tripartite Scheme (5-6 Year Olds) . . . 195
8 Intersection of Systems: Tripartite Scheme (7-8 Year Olds) . . . 197
9 Intersection of Systems: Tripartite Scheme (9-11 Year Olds) . . 200
10 The Number of Children Who Attended the Workshop By Ethnic/Racial Group, By Age Group and By Sex 222
11 Number of Children Achieving Various Stages of Film Making By Ethnic/Racial Group and Sex (1974-1976) 249
12 The Number of Children Who Attended the Workshop By Age Group and Number of Films Completed (1969-1976) 249b
13 The Number of Children Who Attended the Young Filmakers Super-8 Workshop By Number of Films Completed 249c
13a Number of Children Who Produced Finished Films By Age Group and Period of Attendance 249d
14 Individual Testing Data Form 357

CHAPTER I

INTRODUCTION

In the Spring of 1974 we were approached by Rodger Larsen and Lynne Hofer of the Young Filmakers Foundation of New York with the request that we conduct research on their methods of teaching films to children and adolescents. Their methods, based on traditional film technique, were to proceed from a story to a shot list, to filming to editing. As their two books on these processes show, their group had learned to combine skilled teaching of professional film technique with a considerable openness to the needs of the children for personal self-expression. Their books were Young Filmmakers by Larsen and Meade, Dutton, 1969, republished as a paperback by Avon, 1977; and The Young Animators and Their Discoveries by Larsen, Hofer and Barrios, published by Praeger, 1973. These books were admirable for the case studies they contained of New York children and the expression they gave to the children's own basic folk themes of deprivation and villainy and the attempt to make imaginative sense out of unhinged fate.

For our own part, although we had made some ventures into the area of aesthetic development with studies of children's improvisation (Lazier, Sutton-Smith & Zahn, 1971) and narrative (Sutton-Smith, in press) we were not the most suitably prepared to accept this invitation. First, we were strongly motivated by an assumption which effects most developmental psychologists, that life is a succession of structured stages, and that almost any phenomenon of childhood can be studied in order to find out what these stages are. This assumption leads to the view that the way to study anything is to begin at the zero point of its development and trace it forth from there. Throughout this project, therefore, we were to be constantly seeking for what the youngest children could do, while the film makers themselves were usually more concerned with what older children could do. What we saw as important embryonic precursors to film making, the staff of Young Filmakers were to see as childish errors.

A second normal assumption for psychologists was that the important thing about research is that you take control of the variables that are to be studied. At least, you control your own observations in some systematic way. Then, if possible, you codify the variables that you have observed so that they can be handled quantitatively; you test the subjects of the study on psychological competences they can display; and finally, if you really understand what is going on, you manipulate the situation experimentally making predictions beforehand of the consequences of your own manipulations. As we were to find out, very little of this kind of control was going to be possible in the "natural" shop front workshop where Young Filmakers carried on their work with children off the streets.

A third very general assumption amongst those who deal with children in modern education, particularly in the arts, is that they should be left as free as possible to express themselves in terms of the artistic media before them. It is felt that if they receive instruction in how to manage the media it will interfere with their own creative engagement with the materials of art. Professional artists on the contrary (viz: ballet and music) consider it absolutely necessary to begin quite early a serious apprenticeship in which the young imitate adult tutors in a rigorous manner. Most of the psychologists on this project were unwittingly effected by the pervasive educational assumption, whereas the Young Filmakers thought of themselves quite clearly as professional artists.

Finally, and quite apart from these assumptions which were to have considerable consequences in the way the project would develop, we knew very little about films in any technical sense. Furthermore, there had been practically no research of systematic worth on children's film making. Still, urged on by Rodger and Lynne, we proposed to the Ford Foundation that we study (a) how young children proceed to the acquisition of mastery in making films, (b) how teaching technique is related to these forms of mastery and (c) what are the perceptual, cognitive and affective changes that occur to children as a result of these experiences.

This report is the account of what then took place, how the study proceeded and what results we were able to achieve. Given the lack of information available, as well as the fairly general nature of the above books' descriptions of film teaching, it was necessary for us to proceed inductively to discover what it was we had proposed to study. In October of 1974, the Young Filmaker Foundation established a store front workshop in Ludlow Street in the Lower East Side of New York. Funded variously by the Spencer Foundation, the Helena Rubenstein Foundation and the Department of Health, Education and Welfare, they had a commitment to teach children who arrived voluntarily in after school hours and also to conduct some classes for a local junior high school in District One. The store front was on the third floor up a narrow flight of stairs. It was composed of three rooms with large windows looking down on a busy intersection at Ludlow and Grand Streets. The rooms were relatively small in size, each being approximately fifteen by twelve feet. There were three teachers and a technician (one woman and three men) who were the teaching team. With all the film equipment and anywhere from five to fifteen children present at a time, the situation was often overcrowded and relatively impossible from a researcher's point of view. The problem was partly our own because at this early stage we still held to the typical psychologist notion that a researcher was an outsider who was to make more or less "objective" recordings of what he saw before him. Indeed, to help ourselves we videotaped as many of the procedures as possible so that we could go over them at leisure and analyze their constituents. The notion that we could begin our study by playing such an objective role turned out to be a dubious assumption even though conventional in much of social science. Years later it is now clear to us that one should not begin such a process of novel inquiry by attempting to distance oneself from the setting and the people involved. On the contrary one should become as full a participant as is allowable by the conventions and ethics that are held by the group. This should be the first phase of any human inquiry. It is the essential basis for developing a feeling for what is important in the situation. Without such fairly complete involvement it is difficult to know what to attend to, what to focus upon that will indeed reveal what is going on in that situation. Not surprisingly, therefore, in the year that followed a number of us found ourselves not just observing the film making or listening to the film makers, but also taking courses ourselves in how to make films. We were forced to take these steps by our intuitive realization that to understand the process we needed to be at the receiving end of the instruction. Had we known this beforehand, we would have started this project not with the children, but with the film makers teaching us how to make films first ourselves. Our own "objective" bias, together with the exigencies of funding and opening workshops in time for the school year, however, prevented any such desirable first step to this project. What has happened in psychology is that by and large the focus has been so much on what is called the logic of proof (how to take measurements that are valid and reliable, or to manipulate variables that produce the effects that are predicted) that the logic of discovering what is worthwhile proving has not been well developed. In anthropology the error is often of the opposite kind, with so much attention given to discovery that none is given to confirmation. Both are clearly necessary, and what we hope to do in this book is to attend to both, despite our lack of complete clarity about such matters at the project's initiation.

Meantime back at the workshop we were in trouble. The teachers felt that we were getting in the way with our videotape machine. There was simply not enough room for us. The children also began to show some suspicion of our purposes. Why did we have to be there? So the teachers suggested that they would do the observing for us. In fact, why did we need to make any observations? They could tell us what was going on. Surely that would be enough. To be helpful they produced the following list of the major activities that would be taking place in the workshop. In summary form they have outlined here, first the initial exercises through which they put the children to acquaint them with the equipment of viewers, splicers and camera; then they go on to itemize film planning, film production and film criticism and editing.

Figure 1

Film Teachers Chart of Film Making Activities

EXERCISING

- acquaintance with equipment
- first steps towards concrete understanding in film medium
- viewer-
  - frames
  - shots
  - film speed ... 24 frames per second — MOVEMENT
  - ordering
- splicer-
  - physical joining of shots
  - removing what is immediately seen to be unneeded
- camera in animation exercise-
  - moving simple shape in 2 dimensional plane — SHAPE
  - combining simple shapes into complex whole, breaking whole into parts
  - framing
- camera in live action exercise-
  - balancing
  - relationship to moving subject-framing
  - moving subject in 3 dimensional area
  - focusing

PLANNING

- story, treatment, question-
  - initial thoughts of what a movie is — TIME

- shot list
  - visualizing, transfering from description to an ordered list
  - organizing themselves enough to begin production
- organizing a crew
- rehearsal

PRODUCTION

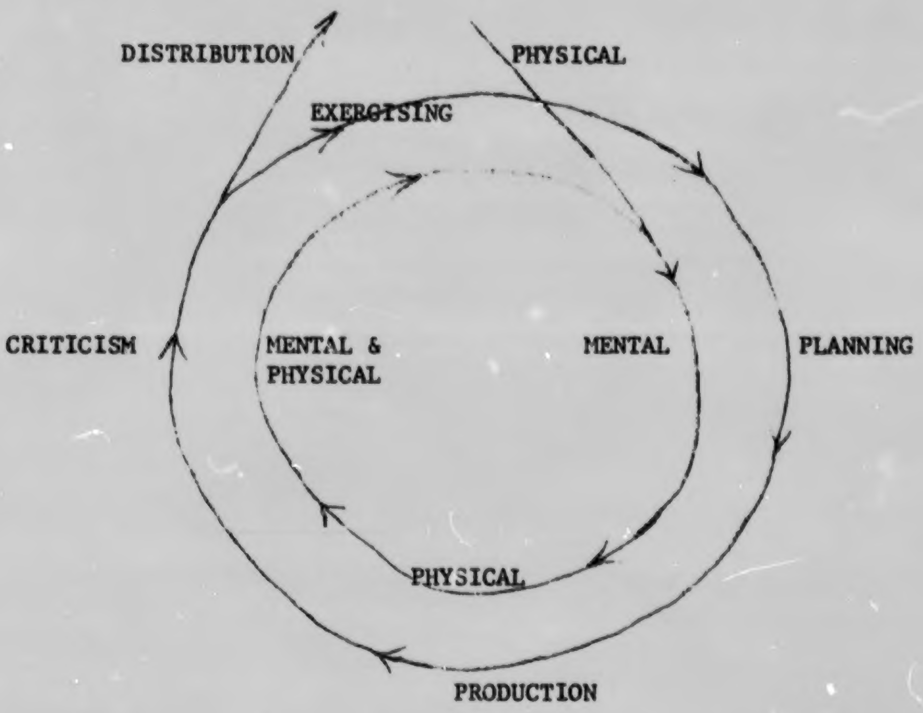
- set-
  - changes in lighting and surroundings in relation to content
  - props
  - clothing
  - makeup
- acting-
  - facial expressions, gestures
  - actions, reactions
  - moving actors within shot in relation to content
- camera-
  - picture clarified and pinpointed
  - framing in terms of content
  - sense of distancing
  - choice of type of shot
  - objectifying environment and subject relationship
  - focusing in terms of content

CRITICISM

- editing-
  - timing of movements within shot
  - timing of an event in relation to length of movie
  - sequencing of events
  - impact of types of shots-close up, medium and long
  - impact of cutting
  - beginning sense of composition
    - within shot
    - within frame
  - impact of lighting on set-up
- screening-
  - seeing the movie-removed from your personal supervision
  - seeing how the audience views what you have done
  - reviewing what you intended and where you succeeded in terms of planning and production and editing

LIGHT

SPACE



Although we did not know it at the time, quite apart from our own difficulties, the teachers were also floundering. They were actually attempting for the first time to teach with a new technique. Instead of beginning with practice live shooting and then proceeding to a story and shot list, they were beginning with editing (or exercising as it is called above) in order to first initiate the children in film concepts (frame, flux, montage). Furthermore, for our sake they were teaching a younger age group (eight to twelve years), when they were more used to teaching twelve to fifteen year olds. Again this was a new workshop location. Previously all work had come out of 4 Rivington Street, the official address of the Young Filmakers Foundation. Again they were teaching school children during the day, when hitherto they had taught only volunteers after school. This meant a new slate of problems having to do with relationships with non-volunteer children and with school administrators. In fact, the school program turned out to be so difficult for the teachers that it was abandoned after a brief period.

Not unnaturally in this difficult period they saw us as outside evaluators.

Furthermore we were evaluators who were not experts in their art form. Here they were pioneers in an uncharted area of teaching, insecure about their new techniques, their new setting and their new subjects, and yet properly prideful about their art form, being forced to sustain our own fumbling attempts to take hold of the flow.

For example, in response to the synopsis that they gave us (Figure 1) we pointed out that although it was useful as an introductory overview, it was not an account of what specifically occurred in any individual case. We had to find out just what happened to each child, and to do this needed to keep videotape logs of the film making sequences through which a sample of children proceeded in the workshop.

The teachers now suggested that they would do the videotaping for us. This would remove us from the workshop and cause less interference. So for some time one of their team videotaped and then brought the material to us for further discussion. Although together we had much interaction over the tapes, there turned out to be a fundamental difference between our concern with behavior as a causal sequence and the taper's concern with film making as a process detached from the individual maker. We wanted to know about the maker, about the context in which he was making the film, about all the influences upon him from moment to moment. The professional film makers, however, were concerned largely with the film and the processes of filming alone. They treated film making as if it was independent from all the other processes in the workshop, as if it was guided by some ideal typical process of film making. Here was an early illustration of the differences between our concern, as psychologists, with the genesis of the process and their concern, as artists, with the telic character of final forms, of "great" movies. They would talk in terms of the child's approximation to the "ideal"; we would talk in terms of the sources of his current behavior. After several months it became necessary to point out that what the teachers thought it was valuable to show on the videotape was not what we needed. It is not easy to express in a few words what it is we needed. The rest of the book is concerned with that. Briefly, however, there is always a gap between a teacher's program and what actually happens to particular children. Some children always learn what they are supposed to, but even they often learn it in their own unique way. Many children do not learn what the teacher wants or only learn it partially. It is in this variety of human behaviors in response to the teaching that we find out what is really occurring. Only through such specific study can we decide whether this is the right kind of teaching or decide what the process really is about in any case.

Step by step after much initial resistance but urged on particularly by Lynne Hofer, and with much good will on the part of the teachers, we were able gradually to institute our various procedures, steadily increasing the systematic nature of our own observations as well as introducing psychological tests to be taken before and after the children's participation in the workshop. Earlier efforts in this direction had failed completely because neither teachers could see the value nor children muster the incentive to tackle the ardors of our testing program. About four months into the program, however, as a result of a regular Monday group dynamics kind of setting in which all teachers and researchers met along with Lynne and Rodger at the "round" table, we hammered out the agreement that children could not get the free teaching at the workshop unless they first brought in a parental permission to participate and to be tested. This was a victory for our kind of "science" even though, as we well know, the measures were very provisional. We were giving tests which were our best guesses amongst the array of what was available. They were measures of perceptual, cognitive and affective processes which might, we thought, be positively influenced by the film teaching process, and then serve to illuminate some of the mental characteristics involved in that process.

Two events seem to have contributed finally to the mutual reconciliation of psychologist and film professional. First, we confessed just how unpleasant our own task had become. Here we were engaged on a mutual project but at the workshop we felt like aliens who were not wanted and who were actively resisted. The professionals could respond to our plight as human beings even if they had not particularly cherished our role as psychologists. The second event of considerable help was the long argument that the teachers had amongst themselves on how to define the technicalities of camera usage. For our purposes, we wanted to be able to judge films so that we could measure the number of long shots, close up, zooms, pans, etc. We assumed that there should be some change in the children's use of these techniques as they got more skilled, or as between the younger and older children. But it turned out that it was extremely difficult to define these matters with the degree of precision that was necessary to make reliable judgments. As the professional teachers came to realize that these things which were second nature in their own conversation actually were quite vaguely defined by them, they also came to have a greater appreciation for our difficulties in developing a "science" of film making by children.

As a result of this gradual coming to terms of the professionals and the researchers, almost nine months had elapsed before we were in any sort of position to get on with our job. We were not helped later either by the several robberies that occurred at our store front location in which much of our insured equipment was for a time wiped out. There were thefts also at Teachers College, Columbia University where the researchers were located. In the second year the workshop was moved to a new location of safer vintage at Henry Street. In doing so, however, we changed the nature of the "volunteers" who came in off the streets and that in turn introduced new psychometric problems of its own. Still before it was through we had many observations and videotapes, as well as pre and post psychological tests, pre and post films and anything from one to ten films produced by each of our children in those workshops. The workshop was throughout the most baffling, the most complex and most richly rewarding setting for our study.

Towards the end of the first few months, and following our psychologists' "instinct" for controlling the conditions of study, we persuaded our teachers to let us set up a voluntary workshop in a room at school P.S. 3 on the West Side in Greenwich Village. This was a school in which we had already much research experience, and in which the principal, Mr. John Melser, was particularly supportive of any kind of new art experiences for his children. We were given a deserted room on the fifth floor in which walls and ceiling were crumbling. An enthusiastic group of students under the architectural guidance of Debbie Snow and the professorial encouragement of Dr. William Walsh, busily set to work to plaster, paint and prepare a darkroom for editing. We were stopped short of painting by the visit of a Board of Education technician who declared our venture "unauthorized." We had to guarantee to return it to its original condition! There was lots of room and twelve volunteer students who came in regularly two days a week for two hours each time. In these circumstances we felt sure we could come to terms with the nature of the film teaching process. In the next chapters we will describe this experience and the tentative formulations that arose from it (Chapters II and III, The P.S. 3 Study).

By the end of the first nine months when we had grappled with our problems at the workshop and set up a more defined and observable environment at P.S. 3, we had all developed a much greater knowledgeability about film making and teaching. Still even after the P.S. 3 study we still felt the teachers were exercising too much control and in undefinable ways. So we engineered yet another study in which the children would be left more completely to themselves and in which the amount of teaching would be most carefully defined. To this end we developed a standardized set of instructions which could be presented to children on videotape. Thus we thought we would control the input and leave the children's output free. Because animation is a more controllable kind of teaching process (it takes just one individual at a time) than live film making (where you need actors, cameramen, directors, etc.), this was our chosen form of film making. In Chapters IV and V we describe the arduous study conducted initially by Sarah Zarem and Dan Mahony and carried through by Sarah. The study was begun at P.S. 3 with four children (2 boys, 2 girls) at each age level (from five years to ten years) and then continued at a Bronxville high school with four children at each age level from eleven to fifteen years. It took over a year to complete this study and extended the empirical phase of our inquiry into the third year, 1977.

In subsequent chapters we return to the original workshop and the studies and procedures carried on by a legion of students (listed in the Preface), all of the time working under the supervision of Chief Research Assistant Frank Eadie. Chapter topics include a study of the films that these children produced and how they differed by age level and by experience; a study of the way in which the children volunteers varied in their many characteristics and on the psychological tests and particularly the changes that were brought about in those that stayed for the whole film experience as compared with those who dropped out early.

The arrangement of the chapters beginning with the case studies in Chapters II and III is meant to introduce the reader gradually to the multiple and often novel concepts involved in film making, delaying the more technical and statistical concepts until there has been a solid grounding at this more elementary level.

CHAPTER II

ROSE: A CASE STUDY IN FILM MAKING

In the late Fall of 1974 we planned for a workshop where we would not be regarded as an alien group in the way. The room was of a classroom size with ample space for us to build a darkroom for editing in one corner. We figured that our own supply of volunteers (M.A. and Ph.D. students at Teachers College) would allow us to man the observation posts two mornings a week. We had three observers plus a video camera person with three children for each observer (twelve children in all). The idea was that an observer (plus video person) would always concentrate throughout on a particular child if that child was present. (The four children so chosen for primary observation were known as the A group.) If an observer did not have his A child present, he would shift to his B child and then if B was not present to his C child. Our primary teacher was Susan Zeig. Our second teacher was Carlos Baez, who although our video technician on this project, had had considerable film experience and wished to have a teaching opportunity. He was increasingly given his wish.

In January the children in the third and fourth grade classes (seven and eight years of age) were circularized to see who wished to be members of this new film club. This school was an "open school" and made much use of parental volunteers to run additional, particularly artistic activities for the children. Over the preceding several years our Teachers College developmental psychology students had provided various classes such as dancing, photography, architecture, etc. We liked to think that although we did research in the school that we also contributed to its educational aims. Children of eight and nine years were chosen because they would be at the school for another year or two after our study and thus would be available for any followup that we might wish to undertake. In our own earlier research with children's dramatic improvisations we had found that it is not usually until after seven years that children can keep in mind the two perspectives--that they are acting and that there is someone looking who must be communicated with (Lazier, Sutton-Smith & Zahn, 1971; Sutton-Smith & Lazier, 1971). Five and six year olds when asked to make-believe act for you (such as finding a wallet in the park), do some very excited things but cannot make very clear to you what it is they are about. That is, given your request, they carry on make-believe actions, but they do not communicate them very well. About seven to eight years, however, children seem to have learned that there is also a code for communication and they then proceed to dramatize with exaggerated actions which tell you very clearly what they are about. They pick up the wallet with great gestures, they open the imaginary doors which they go through widely enough to swing them off their imaginary hinges. On these grounds, along with basic support from Piagetian literature, we proceeded on the assumption that eight year old children should be able to learn how to make films because in films you also have to work out a drama and communicate to others.

What we hoped to get was a list of many volunteers from whom we could choose both our study group and a control group. Then if we observed changes in our study group, apparently as a result of their learning to make films, we could see whether or not the same changes had taken place in our control group. If they had then we could conclude the changes were simply due to other kinds of learning in both groups. But if no such changes had taken place in the control group then the changes in our study group must therefore be due to the learning which took place in the study itself. This is a classic kind of procedure used in psychology. It tells you if what you are doing has some effect, though it doesn't necessarily tell you what it is that has that effect. Sometimes you even have an effect simply by calling your study group a study group. The members feel differently and then begin to act differently.

So it is not a procedure which automatically tells you what you want to know. Which in this case was what difference does it make if we teach films to children. There is an ethical problem also. Why should the control group not get to learn about how to make films? It was our intention to give them a program where they would look at other children's films (of which we had plenty from the many years of the Young Filmaker work) and we would teach them about films through watching them. This way they would also be a special group; they would also learn about films, but they would not get to make them. Then we hoped that if we found a difference between the two groups it would be due indeed to MAKING films, not to being given special attention or anything else. But if we were going to make all of these comparisons, then we were going to have to do some psychological testing. And if we were going to do some testing, then we must indeed have parental permission. For this was 1975 and President Richard Milhouse Nixon and the C.I.A. had served to impair almost everyone's faith in first, the government, secondly, the secret services, and thirdly, anyone who investigated the private behavior of anyone else.

Requesting parental permissions before subjecting children to testing in research programs had become a governmental requirement in all programs over which they exercised influence. Although our own funding came from the Ford Foundation, the Young Filmakers Foundation, through whom this funding was processed, were also receiving funding from the Department of Health, Education and Welfare. As a result we spent a very considerable amount of time composing a letter seeking parental permission to test their children, without making it sound like we were testing their children, and yet being frightfully candid about testing their children. Coincident with Nixon and the C.I.A.'s debauch of our faith in good government, intelligence testing had become an item in the argument over racial prejudice in our schools. It was said that intelligence tests were geared to middle class (White) experiences and discriminated against lower class (Migrant, Spanish, Black) children. Therefore, intelligence testing itself was a suspect activity. Unfortunately for us, it is also true that there is no test that is quite as comprehensive and will tell you quite as much when working with middle class white children as an individually administered intelligence test like the Wechsler Intelligence Scale for Children. This test has many items including sorting colors into patterns, finding your way around mazes, finding missing elements in pictures (which you have to do all the time in film viewing), arranging pictures in sequences (which is just like film editing), as well as the usual arithmetical and vocabulary questions. Furthermore, we wanted to use it with middle class kinds of children on whom it had originally been standardized, and for whom it was still just as appropriate as it had ever been.

But not giving permissions for the use of such tests seemed to have become a new exercise of the liberal and the conservative white imagination. The one on behalf of their poor and the other on behalf of their privacy. So immediately we ran into difficulties in getting permission for our twelve children to learn how to make films with us. The parents simply did not send back the forms. Karen Hansen, our secretary, got on the phone, and got on the phone and got on the phone. Then we went down to the school and met some of the parents right there in the school. We talked to the PTA and explained what we were doing and the benefits their children might well garner from learning to make films. As a result, about three months later than we had originally planned we finally had our twelve "volunteers" (the children had volunteered back in January) and on April 7th the first class took place. Only a blitzkrieg of solicitation had achieved this final outcome. We were too exhausted to apply the same tactics to our control group, and they numbered only four persons as F day arrived. It did not look at this point as if some of our more elaborate research goals could be achieved. Fortunately, we had a more elementary plan in mind as well as our desire to compare the progress in our two groups, and that was simply to observe as thoroughly as possible the teaching process with our volunteer children. As it happened, as it usually happens, many interesting things occurred in this group between the first meeting on April 7th and the last meeting on June 24th. We will try to present our understanding of those complexities in the next chapter.

To begin with, however, we have chosen to look closely at what happened to one child over these two and one half months. This child, Rose G., was the most successful at making a film in this group of children. All who saw the results agreed that hers was the most coherent and intelligible film. What follows then is a case study of the processes which she experienced. This case study is drawn both from written observations, audiotape recordings and videotape recordings. Observations were written unless stated otherwise. Although essentially only a selection of what occurred it is sufficiently complete in its redundancies to establish clearly the nature of this teaching occasion and this teaching relationship. We see this case study as an introduction to the reader of what we believe is a "typical" teaching process with a beginner (who is successful) as carried out by an experienced member of the Young Filmaker Foundation's staff, herself a professional film maker.

First, however, it is critical to realize that we wanted an eight year old because we wanted to see what film making is like when carried out by the youngest children who can do it. Being developmental psychologists we were trying to force this project back to some assumed zero point. The idea being that if one could begin at such a point, then step by step it would be possible to understand how the skill in film making was obtained. We felt that to begin with older children who can make extremely rapid progress might be to miss much of what was going on. Because the younger children had to struggle so hard with even the most elementary concepts, we hoped to find in their slower actions the logic of film making acquisition. But this zero point philosophy of ours was directly counter to the philosophy of Rodger Larsen, Director of the Young Filmakers. He had over the years not found it interesting to work with such young children, but preferred to work with late adolescents. In this he was, as we were to find later, sharing the philosophy of most professional artists of any kind. They are interested in the end point, not the beginning point. Their whole effort is directed towards moving their acolytes towards the highest goals that are attainable. In the nature of things, clumsy and elementary beginnings are not especially interesting. The art form and the training exists for those who are sufficiently talented to use the opportunities to move forward. It is of considerable merit then that Rodger and Lynn were able to tolerate our efforts to go in the other direction and to support us in this work. Still the tension between starting at zero or heading for the stars exercised a form of paradigmatic tension which is important in what follows.

A Case Study:* Rose G.

April 7. (9:40 - 11:55)

The class begins with Susan showing two illustrative children's films, one live and one animation. Susan explains the differences between the two and indicates that the children can make either. After the films Susan explains the initial exercise for all the children. She indicates that they are going to begin by editing some pieces of film. She shows them how to place the film in the film viewer and how to run it through. By winding the handle one makes the action take place in the small lighted square in the viewer. Each of the children take a turn at this. Susan then moves on to explaining the way in which to edit such films with the splicer. She explains how the film is fitted into the sprockets, how it is cut and how it is joined together. Again, the children take turns at doing this.

Rose is very attentive from the beginning (not all the children are) and she is one of the first both to look through the viewer and to carry out the splicing exercise. She shows impatience with Anthony who is the first to take a turn because she feels he is not doing it well. She moves to the other viewer and works with Robin. Then she watches Susan giving instructions to Jessica on splicing and helps Jessica herself. When her own turn comes she marks the part of the film which is out of focus and which she wishes to cut. She calls Susan to help her make the cut. "Now what shall I do?" she asks. She has difficulties because the two ends do not meet. She starts again and seems to be very anxious. She says, "If it is not going to work I am going to kill myself." But it did work and she was satisfied.

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* The bulk of the observations on Rose were made by Lily Shohat; several were done by Joy Dryer. A viewing of the videotapes on the same material suggests to us that they were both a "fair" sampling of what occurred. Nor do they differ remarkably from each other in the character of the relationships which they portray between the teacher, Susan, and the student, Rose.

She asks Susan what she should do next and Susan explains that she should write a story for the film she is to make. Rose goes downstairs to her classroom and comes back with a story she had written the prior weekend (though not for this purpose). When she returns, Susan explains to her how to change the story into a script and how to do a shot list. Rose reads over her story to Susan and discusses the various parts. (The use of script and shot list as a first step in film making seem to have always been but one of the "traditional" filmic procedures with Young Filmaker teachers. As often as not, some of their young people made their films directly in the camera, and in the book "Young Filmmakers" Larsen gives priority to this more direct kind of film making. In our own projects with Young Filmaker teachers, however, they always insisted on scripts and shot lists after the initial exercises with concepts as outlined in Figure 1, Chapter I.)

April 8. (9:50 - 11:25)

Rose brings her story to Carlos who reads it for her. They try to decide which part of the story can be used for a film script and whether they should make a film or animate the story. Rose asks, "What part of the story do you think will be easiest?" While they continue to discuss the story, Rose is distracted by Susan showing Pam how to use the camera. So Carlos offers to show Rose how to work it also. Carlos explains to her lighting, focus and zooms. Rose does everything just as Carlos shows her. Between each step of instruction she looks interested and asks, "Can I try it?" She asks questions about many different parts of the camera. Then Pam and Rose together with different cameras share looking through their cameras at particular targets. At 10:20 Rose leaves for a classroom exam. She returns at 11:25 eager to continue though the class is over. Susan tells her to prepare a shot list for next week. She explains the importance of visual images and actions. Giving an example of a girl who is happy or sad, Susan shows how this must be put into an action that depicts a happy or sad girl.

April 14. (9:30 - 11:25)

Rose is the first to arrive. She helps Susan moving the furniture. She has lost the story she had originally hoped to use for a film and is now trying to write a new story. Susan suggests she rewrite the part she had chosen from her old story. But Rose says she is writing a new one. "Make it simple," says Susan. Rose stops in the midst of writing, helps Susan clean the table, then resumes writing. Susan goes to the blackboard and writes, "Before shooting every movie needs: a story or shotlist (if a story, then briefly in words), or storyboard. The idea of a shot list is to take the whole story and break it down into parts." Susan illustrates by reference to Marion's story about growth of a plant through the different seasons. She says to Marion she must ask what the plant looks like at the beginning of Spring and at the end of Spring; what does it look like at the beginning of summer, at the end of summer, etc. Susan says, "Here's the idea. You get the whole story and break it down. The shot list starts to give you an idea. It's not just the story taking place. It's what happens between the story and the camera. You gotta break the story down to particulars."

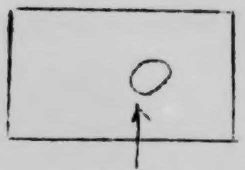
Rose finishes her story. She shows it to Susan and Susan reads it:

Presents

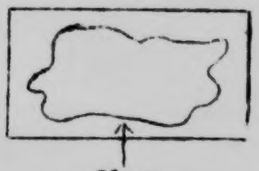
Once there was a little girl She was five years old her name Simone. Her family was very poor And Christmas was coming. Simone knew just what she wanted. It was nothing big. (She never wanted big things) it was a little rag doll it was seven dollars, but she doubted that she could get it. One day she told her mother "mommy I want that little rag doll" "Well Simone, you know we probably can't afford it even for christmas." That night in bed Simone thought tomorrow is Christmas'!' The next morning Simone went to school and when she came back from school there was a present waiting for her. She grabbed it inside was the rag doll "thank you mommy and daddy" she cried "Thank you"

The
End

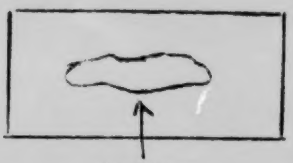
"Do you want to film this story?" Susan asks. "Would it be too hard?" says Rose. "No, it's fairly simple. First you have to write the shot list. The idea of the shot list is different from that of the story. You use the shot list to make a story with a camera. You have to choose the different parts that are important. If you shot this table, you might shoot Anthony and you're saying to the audience that you consider him important. Let us consider your first sentence: 'Once there was a little girl. She was five years old.' The interesting thing is that it might take ten shots to show one sentence. Sometimes it takes ten pages to show one shot and sometimes it takes a lot of shots to show one sentence. There are three basic kinds of shots. The medium shot is the most common. For example, three people talking around the table." "I might show the girl coming in the door, from here up (points to her waist)," says Rose. "That's a close-up. If you take the whole scenery where people look very small, that is a long shot. In the sentence, 'the girl comes through the door,' you have to decide if you want to show a girl and a door or only her face or the whole scenery." While explaining these things Susan scribbles an illustration of each on the paper in front of Rose, thus:



Long



Close



Medium

"The girl and the door," says Rose. Susan points to the paper in front of Rose and writes as follows, saying, "The type of shot goes here and this is the shot description . . . "

Shot Description	Type of Shot

"The girl is carrying a book," says Rose. "Then write in the description of the shot: 'The girl is walking through the door with her books'."

While this is happening and interpolated with it, Susan is giving similar instructions about shot lists and shot lengths to Anthony and Marion about their respective pictures, including showing Marion the kind of lens she will be using for her animation story. Rose listens to the conversation between Susan and Anthony about the movie "2001". Rose adds: "Do you remember when they started sending signals; isn't that weird?"

Susan says to Rose, "Do the second shot. You have lots of descriptions here. Her family was very poor, she reads. What does that mean to you? Think of what their house looks like. You have to think about what the walls look like. This is a pretty good room for that, it's peeling," she chuckles. "You can take one shot with the plaster falling off." "First shot, the girl walks through the door. Second shot, the house," says Rose. "Describe the apartment. You really have to think about the whole house," Susan replies. "First the wall with the plaster falling off." "Well that's one thing. What else?" "A bare table? Maybe a book on the table?" "You can hold the camera still or move the camera around. That is called panning," says Susan. Anthony interjects: "We can put newspapers on the wall (referring to the far wall of the classroom." Rose responds, "It's supposed to look shabby not messy." "Why don't you film the sink," says Anthony. Then Susan intervenes and tells Anthony to get back to his own project. "Let Rose think of what she wants to do," she says. "Are you going to have a panning shot?" she asks Rose. "Yes," says Rose. "I will pan from the peeling plaster to nothing on the table." "Okay, what's the next shot?" "She walks over to her mother." "Okay, How are we going to know it's Christmas?" Anthony: A Christmas tree. Rose: No, they're poor. Susan: Think of pictures. What pictures show Christmas or things having to do with presents. You can think about shots outside. Rose: What will shot three be? Susan: You have to describe Christmas. That's a toughy. Rose: How about a little tree with a little sign that says Merry Christmas? Susan: Fine. Then what would you do? Rose: It's the day before Christmas. Susan: You're showing the table. Then what? Rose: I'll show the back of her looking at the tree. Susan: Fine, then write that down. Rose: I'll show her with the tree behind. What kind of shot is it going to be? Susan: A medium shot, but write down that you want to take the shot behind the girl.

There is considerable conversation here about Anthony's animation which has to do with rocks, disasters and burning people. They burn some of his paper figures on the table, and Anthony laughs, "See him slowly burn . . . lose his pants . . ." And Rose adds: "Melt his foot off. Then take a picture of him with one leg and then take a picture of the burnt leg." Anthony responds: "Rose, you're sick. You're really sick." Some time elapses as Susan continues to attend to Anthony's filmic problems. Rose: You're only helping Anthony. Susan: You have to take a turn. You have to learn to work a lot by yourself. Rose: Can I have her ask her mother about the doll? It's a one room house. I want to show the mother sitting on a chair. Susan: Okay, write it down. Rose: What kind of shot is: Simone is walking to Mom? Susan: What do you think? Rose: Medium shot from the side. Susan: Right. Anthony: Pan. Rose: No, she is moving but the camera isn't. The bell rings and Rose takes her shot list which now reads:

Shot Description	Type of Shot
Shot 1 Girl walks in door with her books	Medium Shot
Shot 2 Wall with plaster peeling to empty table	Panning
Shot 3 Simone looking at Christmas tree	Medium from behind
Shot 4 Simone walking to mother in chair	Medium from side

April 21.

Rose not present. On a visit to the Museum of Natural History.

April 22. (9:45 - 11:20)*

(9:45) R and S talk about the Museum of Natural History that R went to the day before. R: When can we start filming. S: When you are ready. R: By the time I will finish my friends will be gone. S: When are your friends leaving? R: In May. S: You can finish before May. R and S discuss the scene that depicts Simone's poor family and that will be filmed in the room at P.S. 3. S: You have to envision the corners of this room. This wall is moveable (points to the partition). Try to remember how this room looked before we moved the partition to this position. R: Will we do it today (meaning film the scene)? S: No, but you have to figure within a week. (9:55) S reads:"Simone knew just what she wanted." How do you want to show it? R: She tells her mother, "I want this doll." S: What doll? Where does she see the doll? R: We show her telling her mother she wants a doll. S: How? What is the best way? R: Ah . . . Maybe show her coming from school? S: Do you want to show her outside. R: I can bring a doll. S: You don't have to. Do you know any store with toys? R: Yes, near my house. S: I can meet you there. R: Can my mother come to see the movie? S: Of course, she can come to the workshop. (S writes the address of the workshop and gives it to R.) (S and R continue to work on the story together. In general, S asks R how she wants to turn each sentence of the story into a shot list. R suggests something and they discuss it together; generally S asks R to imagine the scene and to try to figure out the actor's and camera's positions.) S reads part of the story again. S: What is the picture then? R: A street shot, walking down the street. S: What street? R: Walking down Second Street. S: Write it down. Where is the camera? R: Behind her, on the corner. S: Write it down. R: How do you make a sound? S: Afterwards, when we finish the movie, we send it to the lab and they add the sound on a magnetic thin strip. (R does not seem to understand the process completely and proceeds by asking more questions.) R: But how do the sounds and the voices match the actors? S: It will be pretty close. R: We can make the sound here. S: Yes. R: We have to make the movie in my house. S: Why? R: Because my friends live there (meaning the friends who are going to be the actors). S reads: Walking down Second Street. What kind of a shot? R: Close up. (Both stand up.) S: What about the walking shot? R: She is coming. S: You are the camera. Where are you standing? (Both act the scene together.) R: I am in the corner and she is coming. What kind of a shot? A far away shot. S: Write it down. R writes: Long shot from corner of street facing her. R: How long will the movie be? S: It is hard to tell, but not more than five minutes, okay? R: Okay. S: What is the next shot? R: Show her in the window. S: In the reflection of the window? R: What shall I write? Stopping at window of toy store or go to the window? S: What kind of shot? R: Close up from the side of her. S: If you describe the shot, it will be better than giving names. Then you won't get confused.

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*In the following, S = Susan, R = Rose.

(10:10) S gets up to look for a ruler in order to draw lines between each shot description. S:From the side of her and close up. If you like it, you can come to the workshop. We have a lot of boys, but we have troubles with girls. R: I will come. S: Do you want any shot before walking in the street? R: Walking to other building from far away. S: From behind or in front. (R thinks awhile.) S: Where are you? R: Shot her coming to P.S. 3. R (on a second thought): I don't want P. S. 3. S: How do you do it? R: Choose different building. S: Good idea. Write it down. (R writes: "Walking into building" in the shot description and "from in front of her, medium shot" in the type of shot box. R finished shot description number A, B, C and 1, 2, 3 from last week. She is working now on shot description number 4. S reads the shot list description, says "Nice" for panning (shot #2). They discuss what they have done so far.) S: What next? R: Show that Simone is walking to mother. S: How shall we show it? (reads:) "Simone walks to mother." How shall we do it? R: Simone says, "Hello", to mother and runs away. S: Write it down. What type of shot? R: Medium from side. S: Write it down. R: The next shot is "Simone is going to her room." How do we show it? S: Do you want the whole room or just walking into the room? You don't have to show the whole room. R: Long shot, from behind. R and S are discussing the next scene (#7) in which Simone and her mother are talking. R: How do we show them talking? S: They can really say it in the rehearsal. R: The sound is not gonna come out, so I just can tell them their lines. Is he filming (points to Ken who is videotaping Jasson). (10:17) S: No. (She explains the videotape to R. Both move to the other end of the room near the sink. R looks very curious about everything that has to do with the filming process, asks questions. It seems to the observer that she is determined to finish the shot list in order to start making the movie.) S: Let us see the camera. (R holds the videotape camera.) S: If you can imagine a camera with tape recorder, that is what videotape is about. It carries both the picture and the sound. (On her way back to the table R notices Carlos teaching animation to Jasson.) R (to Jasson): Are you making already a movie? S: No, only animation. R: What is that? S: It is a series of photographs popping in and out. R: Oh, it is just that part of it, not the whole picture. (10:20) (Both returned to table.) S: Is Simone walking into the room or out of the room (scene #5)? (R gets up and acts out what Simone will do and then sits down.) R: She is walking out of the room and into another room, but we are not showing it and that from back of her from far away. S: Nice idea, but difficult to do. But we will try it. R: It is funny (laughs). "She walks out" and you are in the closet taking pictures. S: We do funny things when we make movies. (Both smile.)

R looks at the copies of another movie which Susan is working with. S: Don't worry. In this movie we made a dummy and threw it from the roof. R: Was it nice? And who made it? S: Yes, the kid made it. (It was the kid who made another movie that R had seen.) R: It is funny. S: Yes, it worked alright. Let us continue. R: How did he make the dummy? S: He made it from old clothes and stuffing. It looked pretty good. R: Only from far away. You can't show it from close up. S: Right. R: This story (meaning "Presents") has turned out to be a much longer story. S: Where does Simone live? R: Silver Town (not sure), not far away. S:She comes back from school? R: Yes. Close up so we can see the doll. (R gets up and acts out the scene.) (Up to now, R is completely dependent on S. S usually initiates the next shot by asking R questions. R responds to those questions very effectively, sometimes with the encouragement of S. R acts the scenes out. It seems that they have a very good and relaxed relationship. It is very obvious that S likes R.) S: Fine. (R writes it down and shows it to S.) S (reads from the story): "One day she told her mother." Sometimes it takes a lot of time to write two or three sentences, but you can show it in one shot. What can the picture be? R: Walking to the room.

S: You already have her walking in the room. Do it another way. R: What do we do after the shot list? S: You tell the people, get all the things you need and we film it. R: So that is the reason why we have to finish today. S: We are up to the mother. What do you want to show? R: Simone is showing the doll to her mother. S: That is fine. R: What about the mother? S: Show them talking. R: Show them talking from the side? S: What are you interested to show in talking? R: Their faces. S: Okay. R: It is from the side, medium shot. S: In medium shot, you will have to show half of their bodies. Do you want that or a close up? R: A close up. Oh, we will have to go from my place to P.S. 3 back and forth (for the shooting). S: One of the interesting things about a movie is that you can change things around. You can shoot everything of the same spot at the same time instead of going back and forth. Then you splice and edit. R: You have to help me do that. S: Sure, I will help you splice and edit. That makes the movie interesting. You probably edit in this order (points to the shot list), but this is not the shooting order. Okay, they are talking (meaning Simone and her mother). You got a couple of more scenes. (It seems to the observer that R understood S's explanation of making a movie very well.) R: After that, we show her in bed. How do we do that? S: You have to do it. R: We can show her lying on a coat. S: She can't be so poor. R: So we can show her in bed, from this position. (R stands on chair and acts out the camera position.) S: Yes, angle above (scene #8). R: What shall we do after today? S: Maybe start shooting. R: In describing an angle, how shall I write it? S: From above. You somehow have to stand on a chair. R: We can show her covering her body. S: Of course, you can put talking in the sound track. S (reads): "The next morning Simone went to school." R: We will show her leaving the house. How shall we make the Mom? The actress is the same age as Simone. S: What do you think? How shall we do it? R: Put make up. S: We can add wigs. We can show different ages with make up from a young girl up to the age of 75. In Shakespeare there were no women in the theater. R: Shakespeare was a woman? (laughs and giggles) S: No, there were no women as actors then. R: Oh. (Back to scene #9) Kisses her mother goodbye and walks out of the door with books. S: Write it down. R: What kind of a shot? Two shots . . . No, a panning shot from her mother to the door. S: Where is the mother? R: Sitting on the table. S: Okay, what do you want to show next? R: Coming back from the door, really tired (meaning Simone). (R mimics a tired face.) S: Okay. (Both laugh.) S: That will be a lot of fun, "coming back through the door really tired." R: With books. That is easy. We can use my books. That is two shots. S: Sure. (R writes it down and reads aloud, "comes through door and puts books on floor. She is tired." Medium from front. S nods her head.) S: What is she doing when she is tired? R: She walks slowly. S: So, instead of tired, write down, walks slowly. Behavioral descriptions are better than emotional state description.

(10:45) R gets up and acts the scene out. She leaves the room, then opens the door and acts a tired girl. She puts the book on the floor and walks very slowly. (R acts the scene without being asked. It looks like it is a lot of fun for her to act out scenes.) S: A good gesture of a tired girl is dragging the feet, and instead of writing tired, write down what you have just shown to me. (S acts out the scene, dragging her feet. R acts the scene again this time imitating S by dragging her feet. R erases the words, "she is tired," and writes instead, "dragging her feet.") S: Then what? (R thinks for a few seconds) R: Ah, . . . I don't know. Ah, . . . she goes to table and there there is a present for her, okay? S: Sure it is okay. (R writes it down on a new page of a shot list.) R: Long shot from in front of her. Maybe it is medium? S: Whatever you decide. R: She walks to table and the table is over there (points to the end of the room, near the sink). S: Okay.

R: She opens the gift and she is very happy. (R acts briefly the scene and pretends that she is very happy.) S: All of a sudden a father (she refers to the sentence, "Thank you Mommy and Daddy," in the story). Do you want him? R: Sure, but where can I get a father? (R pauses to think about a suitable person for the part of the father.) S: Do you want anyone you can get? R: Well, I don't want a father. I can't get anyone. S: No, he was in your story. R: Maybe my teacher (laughs). (thinks for a few seconds) I don't even remember who is in my class. (10:55) S: Do you have a brother? R: Yes, he is four. R: Well, he (the actor) doesn't have to be very tall, but not short. Maybe John (a classmate). I will ask him. S (reads, while still in motion): "She walks to table, there is a present on it." How are you going to show that? Write it down. I will be back. (S leaves for bathroom.)

(10:57) R continues with her task. She is not relaxed. She moves in her chair. S returns. S: Did you do it? (S looks at R's shot list.) No, you have to do some by yourself. Otherwise we get nowhere. (R continues in the task. She concentrates and mumbles to herself. R gets up to speak with S, who is near the window, and tells her that she is finished. S comes to the table.) R: What kind of a shot? S: Do it yourself. (R thinks awhile, about 30 seconds, and tries to figure it out, then writes something. Then R gets up and tells S, who is back near the window, that she did it.) S (reads): "She gets up and hugs them both. Medium from the side" (scene #13). S: So this is the end, Ah? R: You don't like it? S: I can show you how to make a movie. Count the number of shots in the school. R (counts): 10 . . . 13 chots. S: The shots inside the school we can do next Monday. We will rehearse it and then we shoot. (R seems very excited about the prospect of shooting. She jumps.) (11:03) S: You have to see what we need for next week. Write the list of materials we need for the 13 shots. R: Do we have to do it now? (R is tired and restless and she would rather leave.) What we need is books. S: What else? R: Old sheets, little Christmas tree (writes it down), an old doll. S: You said you will make it. R: Okay, I will make an old doll (writes it down). S: What about the mother? You want to show her old. R: Make up. S: Just write it down. You don't have to bring everything. S: What kind of shoes? Who is the mother? R: She is short. She looks like a mother. S: What else? R: I don't know. (R looks tired.) . . . A wig. S: Yes, what else? R: That is now for the whole movie? S: Yes. R: A new doll, a box for a present. (R thinks about the whole story, and she selects the necessary objects for the film.) S: I can bring a table cloth. Think about the house and bring all the decoracion that you can get. Think about things that make the scene better, things that look good in the frame. R: I got a wig, brown one. S: That is perfect. It will make her look older. Make a nice present. R: Okay. (R writes down, "wrapping paper.") S: Sometimes pictures in the wall are good. If you can bring a suitcase with all kinds of things, that will be very good. R: That is going to be fun. S (looking at R's list of materials): What you don't have? You have a wig. You can make a doll. Go through the list and you can call me to the workshop before Friday. R: Okay. S: I will bring a table cloth. Can you get a Christmas tree? R: I don't know. They don't sell them anymore. S: Is it going to be a black or color film. R: What is easier? S: What do you want? R: Color. S: I have to bring lights. Shall I bring make up? R: Yes. S: What about sheets? (The observer offers to bring sheets.) R: What about the Christmas tree? S: Well, I can bring decorations. Can you make a Christmas tree? R: I don't know. S: Think about everything that can make a Christmas tree. What about plants? R: We have some in class. S: Would it hold decorations? R: No. S: Get some branches and I will bring Christmas decorations. R: Okay. S: Can we go outside? R: Yes, if you tell John (the principal).

Can I go now? S: Yes, here is your material list. The first day we will shoot in the school.

Observer comments. S used the method of asking questions in order to make the shot list. S and R move step by step through R's story. S usually asks questions such as: Where is the camera position or the actor position and R answers. If R has difficulty answering, she is asked to imagine the scene and even to act it out. R was very cooperative, but very dependent on S. She would not have finished the shot list without the help of S. She was determined to finish the shot list in order to start shooting, which she is very excited about. Toward the end she became very tired and was eager to leave.

Rose's shot list at the finish looked as follows:

Figure 2

Rose's Final Shot List

Shot Description	Type of Shot
A. Walking down Second Street	Long shot from corner of street facing her
B. Stopping at window of toy store	From the side of her, close up
C. Walking into building	From in front of her, medium shot
1. Girl walks in door with books	Medium shot
2. Wall with plaster peeling to empty table	Panning
3. Simone looking at Christmas tree	Medium from behind
4. Simone walking to mother in chair to say "Hello"	Medium from side
5. Simone walking out of room	Long shot from behind
6. Simone walking out of into room with old doll. To mother	Long shot in front of her
7. Show them talking	Picture of their faces. From the side, close up.
8. Simone in bed	From above. Medium shot.
9. Simone kissing mother good-bye. Then walking out door. With books.	Panning shot, from table to door and out.
10.Comes in door and puts books on floor. Dragging her feet.	Medium from in front.
11.She walks to table there is a present on it.	Long shot from in front.

12. She grabs the present and opens it.	Medium from in front.
13. She gets up and huggs them both.	Medium from the side.

April 28. (Monday)*

After making the shot list the prior week, S and R continue this week to make preparation for the filming. The observations take up sometime after the morning has begun. Rose and her two actresses, Alexa (A) and Melissa (M) are present. They are the girl who wishes the present and the mother who is to give it. The children are in the business of converting a school desk to a couch with green paper. The parents in R's movie are to sit on this couch.

(10:00) S: There's no set way to make a couch . . . You hafta measure it. (R is cutting green paper without measuring it.) If you want to make a movie, you hafta be serious, I'm not kidding you. Measure everything (gives R ruler and pencil). Take the green paper and do it on the table. When you finish (cutting paper to make "sides" and back of couch), look through the camera. You'll see what it (the set) needs. It's good for you if you look at the setting through the camera. Can you bring the material (list of materials needed) tomorrow? (A and M discuss the dimensions of the paper. S and M discuss AC/DC electrical outlets after M almost trips over an outlet in the floor. S shows R scraps of lace.) S: Rose, do you mind if we shoot your film in black and white? R: No. Is it because so many people like color (meaning a shortage of color film)? S: We have lots of black and white and very little color. A: Everyone likes to use the color 'cause it's colorful, right? S: I guess so. People are more used to it. A: 'Cept for things that are really black and white, like on T.V. S: But it won't look like on T.V. (10:25) M (to S): Do you have more green paper? S: You can take it off the window (used as window shades). You did a nice job on the side parts. Looks very nice. How does it feel? (S sits down.) Feels fine. R: But no one's gonna be in it (sitting in it). S: How come? R: It's not written . . . (in shot list). S: We can change it. S: I brought eye stuff. Red and brown. R (calling to M, who is cutting paper at table): Make up. S: We hafta get a wig. R: A wig? A: We can do it in the 1700's or 1600's. S: In the 1600's? Oh, what an interesting thought. It would be an historical drama. What time are you interested in? Have you been in a history class? If you're interested, you can look in books and find the costumes of that era. A: Reason I thought of 1600's 'cause there were lots of poor families then (referring to poor family that R's story is about). S (to R): You have a very hard-working friend over there (referring to M). While you're talking . . . R, we don't have that kind of paper. You measure it first and don't waste it.

(10:35) Carlos and Jason are setting up animation stand. S (to Carlos): If you put it (the camera) on top of a table, you'd have more height. What's this exasperation? How many rooms do you need? R: (?) M: Where are you gonna show her with the doll? R: Just in this room. We wanna show her coming in the front door. And this is the main room to the apartment. S: Okay, we'll set it up however you like. Is this wall (partition) the way you want it? You want a curtain over it? This is good. (They move the partition and couch.) M (to R): Is the living room here? R: What about this? (points to Carlos and Jason on floor) S: When you're shooting you can ask them to move. We can shoot from here (standing in the middle of the room) and they'll be behind us. (S brings out boards from the closet.) S: We can do this Japanese style. R: What do you mean? S: Well, if you've a low couch, you can have low furniture. (Tries to balance the wood.) All we need is some nails. A: It can't balance for the whole movie. In the middle it'll go boom. S: Is there a box or something we could put here (on the side)? M: Yeah, outside. (M runs out of the room and returns carrying a box. She piles the wood on top of the box, making a "coffee table.") R: We could put some newspaper on top. Can I look through the camera? S: Not just yet. What's the first thing you see? What happens in this room? R: Okay, she's gonna walk in the door. A, just walk in. You know how to walk in a door. (A walks through main door to classroom.) S(in closet): One second. (S gives the camera to R. A walks in again.) R: Don't walk right into the camera. (A walked directly to R holding the camera.) A: Is the camera on? S: No. There's no film inside. Don't push it (the button on the camera, S says to R) because the battery can run out. R: What's a medium shot (referring to where she's standing)? Where should I be? S: You decided . . . um . . . medium shot. Remember you decided how much you wanted to see of her. R: hmmm. S: Okay, you can decide again. M: What kind of face should she have? R: Come in (through the door) with a regular face. S: You gotta tell her what's a regular face. A: I keep smiling. S: It's not funny (trying to help her to keep from smiling). Nothing's changed. M: Look, next shot says "wall with plaster peeling" (reading from shot list). Where's that gonna be? R: Long shot. S: Forget the name of the shot. What do you want to see? R: All of her. M: You gotta walk . . . into the kitchen. S (moves): Everyone has to get used to coming behind the camera when we shoot. R: We don't shoot the whole thing at once, do we? S: No, we stop the camera. (A walks in.) S: Okay, you say "cut." R: CUT! M: What should I be doing. R: Just sitting, M. Remember what you wrote down: "panning." You say you're gonna pan from that corner over there. (R points the camera.) S: Okay, and now what about A? When is she gonna get to the table? R: I cut it and then show her. S: In the editing we'll be able to fix up the time. M: You'll hear the "cut" (meaning R saying "cut"). S: It's not sound. After it's all done (shot) we send it (the film) out and this sound stripe is put on the side. S: Where's the Christmas tree gonna be? R: I don't know. S: You decide. R: On the radiator. What should the shot be? S: I don't know. Look in the camera. What do you want to see? (R looks through the camera and pretends she's shooting. A waits for the "go" signal from R, trying hard not to smile.) S: If we think you're going to laugh (to A), don't look at the camera. (A tries not to smile.) If we put your hair up (to M) in a barrette, it'll make you look more like "mother." (A walks right to left across the room and kisses "mother.")

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* Observer is Joy Dryer.

(later.) Next scene: A walks out of the door. R: Okay, cut. (A stops part way out the door.) S: Do you see her? R: Yeah. S: Well don't you want her to go out of sight? R: Yeah. S: There's this whole period of time when the mother isn't doing anything. You'll find that your script is like a blueprint. But you can change something. I mean, you haven't done this before. You can have the mother do something that's more interesting? M: I could take a pan. R: But we don't have anything. S: Do you have a pot you could bring? Cutting up a piece of fruit? Anything, cause it's kind of bare. (R goes to the bathroom.) S (calls to R): Tell

A where you're going (A is waiting in the annex for R's signal to walk onto the set). M: I could peel an orange. S: How could you peel it? Can you bring a spoon or a fork (to A)? Can you bring in a metal cup (to M)? You'll have to ask her (R) and see what she thinks. (R is still out of the room.) M: A paper plate? S: Sure, where do you live? M: On Prince Street. (R returns.) R (to M): You could be making a snack. S: We were just talking that you might want to have some utensils. R: Do we have to? S: Don't despair. (R seems upset.) A: I could be coming out with my doll. S: See, everyone's getting very serious about it. Don't worry about it (to R). R, you're never gonna be closer than four feet 'cause otherwise it'll be out of focus. Where's your script? Are you in front of her? You just want to see her face? Let me show you something. Here's the close up (showing R on the camera). The "T" stands for telephoto. That's close up. R: Then I can stand in the same position and do a close up? S: Yes. R: Well, I wanna see her holding the doll. S: That's not a close up. R: How can I remember tomorrow? S: You'll be surprised what you remember. R: What should I make it? A long shot? (R writing on script.) S: A medium? R: We want to see her whole body. Okay, A, keep walking. Stop.

(later.)S:The story has the lines. You want to show the two faces (A and M), so practice that. R (to A and M): Okay, talk. M: You gotta tell us what to say. S: Further back, R. R: Okay, closer (telling A and M to get closer to each other). I can't get both of their faces. S: Well, see if it looks like a good shot. R: It doesn't. M: Well stand back! S: We'll use the other camera. R: You say, "Mom, I wanna new doll for Christmas. It's seven dollars. (A and M repeat lines. R complains that they speak in a monologue without expression.) S: Don't tell her what she's doing wrong. Tell her how you want her to sound. (A repeats line.) R: You have to have more tone in your voice. S: You don't have to worry about that (the sound) now. R: They need more expression in their faces. S: I think we should stop the rehearsal now and decide what people will bring tomorrow. R: What should I bring? S: You gotta bring something for the Christmas tree. And a wrapping or box and a new doll. R: I wish we could do it in order (shoot it in order). S: We'll do the inside shots together. R: And then I can splice it. (R is worried about editing correctly.) S: That (the editing exercise) was just the first day and I was just showing you how for practice. You'll get good at it. Bring in a present. Something that looks nice. R: I don't have any wrapping paper. M: You can use tin foil. S: . . . even if you use an orange juice can and paint it. It's time to go. R: I don't wanna go . . . S: You put the camera away. We'll have it all set up like this (tomorrow). Remember what you have to bring and I'll see you tomorrow.

April 29. (Tuesday)*

Anthony (N) acts as the father; Alexa (A) acts as Simone; and Melissa (M) acts as the mother.

A, M, R and N were the first children to arrive. They brought with them material for the movie: forks, knives, plates, cups, a small Christmas tree, an orange and a mandarine. R tries to set up the scene. S(to R): Did you get everyone set up? Why don't you rehearse what we did yesterday? In shooting, this light (the room light) is not enough and we will have to use movie lights. (R puts make up (rouge) on M, who is playing the mother. R and M are laughing. It seems that all, M, N and R, are having a lot of fun and they are very excited. N, M and R move to the kitchen, near the sink. R explains to N one of her shots, with the camera.) R: This is a shot from the peeling plaster to the empty table. (R is very excited. She feels she is the real story: the director and the cameraman.) S (busy with Marion, to R): I spent the whole day yesterday with you. Why don't you rehearse? Set up everything like we did yesterday and when you are ready we will start shooting. R: Ah . . . (very disappointed that S is not going to give her full attention).

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* Observer Shohat.

(9:55) R shows the camera to M, A and N. She tells them how to use the camera, where to look and what to press. A: Are we going to practice? R: Yes, if I get the camera (N is using it in the kitchen). R (yells with a very authoritative voice): Excuse me, but I need the camera. (R goes to the kitchen and takes it from N. Rehearsal begins. A goes out and then comes back.) A: Where am I supposed to walk? R: Through the door, don't you remember? Get back (in a command voice). (R looks through the camera. A comes through the door and walks to the kitchen. R (looking through the camera): Perfect. Cut. (R goes to the kitchen. A rehearses the next shot. R looks through the camera on the peeling plaster in the ceiling and then to the empty table.) R(looks at the shot list and says to herself): I have to show the Christmas tree. R (to A with an authoritative voice): Okay, now you have to walk to the Christmas tree. (A does and R observes through the camera.) Now, walk to mother (M who is sitting near the table. A walks and stops before M.) R (angry, shouts): Where are you going? A: To mother. R: You have to say, "Hello," and then kiss the mother. (They rehearse again.) R: Cut. R (to A): Now, walk to the living room. (A does and R follows her through the camera until she disappears in the living room.) R: Cut. R (to A): Stay there for a minute. Don't make this face (A is smiling). (A brings a doll from the living room to the kitchen. She walks to her mother.) Don't laugh. We have to do it again. (They rehearse this part again. A (in the kitchen, to M): Mom, I want a doll for Christmas. It costs seven dollars. M: We can't afford it even for Christmas. R (to A and M): Stop laughing. I need more expression. (They rehearse this part again.)

(10:05) R decides to rehearse everything again from the beginning: A comes through the door to the kitchen, to do the shot from the falling plaster in the wall to the empty table, where M is sitting. R (to M): You are not sitting here now, only later on we will show you setting up the table. S (comes over to R): There is one thing. You can never stand closer than five feet because you are going to be out of focus. R: But it is a medium shot. S: It does not matter. You have to be five feet away. (S leaves and R rehearses the whole scene on her own. She gives instructions to A to go again to the bedroom and bring the doll. R tells M to rehearse setting up the table.) R (observes M through the camera): Okay. Cut. Now, the scene with the doll. (R looks at the shot list.) R (to A): Okay. Come . . . cut. A, don't make faces. We have to repeat the scene. (A goes back to the living room.) Don't smile, just come like this. (R acts the scene. She walks regularly with a serious expression on her face. A rehearses.) R (to A): Have a sad expression on your face. (M and A act the scene with the doll again in the kitchen. A: I want a doll for Christmas . . . M: We can't afford it . . . R observes them through the camera.) R (smiles): Perfect. Finally that was good. (R looks at the shot list.) We have to continue. (R goes to S in the living room.) R (to S): We need the sheets. S(looks at her watch): Run through the rehearsal for another fifteen minutes, then we will shoot. (R sets up the scene in the bedroom. A is asleep with her doll on the floor covered with a white sheet. R (to A): You will be like this (makes a sad face) and then fall asleep. (R climbs on a table to shoot the scene from above.) R (to A): You look like a dead person. Open your eyes. One, two, three, close your eyes. S (shouts from the living room): R, when you shoot, stay five feet away. R (looks at the shot list): Okay, the next shot . . . (pauses) A, you have to kiss your mother goodbye. She will be sitting on the couch. (The whole group moves from the bedroom to the living room, except A.) R: A, come on. (A comes from the bedroom to the living room. A kisses her mother, M. R observes through the camera. She is in full control of the situation and totally absorbed in the task.)

(10:17) S: This is a good shot (the above shot). (S instructs R how to hold the camera.) S: Hang on to the camera like this (shows her how to hold it close to her body) and then move the camera like this (she shows R how to pan). (S hands the camera to R. R tries to do what S has just showed her.) S(watches her very closely): It (the camera) is part of you. Keep yourself close. R: I want to do it over again (the last scene). S: Fine. (10:20) They rehearse the scene of "goodbye" again. R is absorbed in her tasks, directing and shooting. S: How did that feel? R: Better. (R goes to the kitchen to look at the shot list, which she forgot there. S gives instruction to A for the next shot.) R (to A): When you are coming home A, take the books out and sit near mother. A comes through the door and acts as a tired girl.) R (to A): Now, look at the present (on the table). Look at it and grab it. Look happy. (A acts the scene.) R (loud voice): Not like this. (R acts the scene out: surprised expression on A's face, then she grabs the present and looks quite happy, smiles. R acts this scene very well, quite convincing and without any inhibition.) R: I think this is a hard scene (the above). R (back behind the camera): Come on, A, do it. (A acts the scene out.) S (comes over): Another time of this scene and then we will shoot. (S whispers something to R.) R: We are going to shoot now. (R is very excited. She jumps. S shows the lights to everyone. S instructs R how and when to use the lights: "only when you are shooting." S instructs R how to read the f-stops that are in the corner of the viewing field of the Eumig Viennette.) S: Do you see the numbers move? R: Yes. S: What number is on? R: 22.8. S: These numbers are not reliable, but after a while you know how to operate it. (R plays with the trigger.) S: Don't waste the battery. (S gives R a box of film to open.) S: This is a film Super 8. (S opens the camera and shows R how the shutter is open when you push the trigger.) S: Do you see this little circle on the left? It drives the film around. (R listens very carefully.) The film has to face the lens. The light comes through the lens and hits the film. (R and A listen.) (10:32) Fire drill sounds. Everyone leaves.

(10:45) Everyone is back. S: Let us start. (S sets up the light.) All cast behind the camera and light. R, keep the camera close to your body. (R instructs the actors. S watches.) R (to A): Don't look at the camera. Don't look at the light. Just walk in. (R prepares to shoot everything from the beginning.) R (to A, with a warning voice): Don't mess it up, A. Go straight, so I don't have to move the camera very much. (R is anxious.) (A comes in. R starts shooting.) R: Cut. Uhhh. (R sighs with relief.) (They move to the next scene in the kitchen. S holds the light.) S: Do you remember what you wrote in the shot list? "Panning from the plaster to the empty table." (R rehearses panning with S's guidance.) S: Did you see whatever you wanted to see? R: Yes, but I will rehearse it again. (R rehearses again and then shoots the scene.) S: Did you see everything? R: I don't know. I could not see. My eye hurts. I am not sure. (R is very anxious. She wants to get everything perfect.) (S asks R to shoot the scene again. S reminds R to keep the camera close to her body.) R: This time I saw what I wanted. S: You have to remember that you have to stay five feet away. S: R, I forgot to tell you something. (S explains to R how to tell how much film is left from the red and white indicator on the camera.) S: We will get the film back on Monday. R: But without the sound. S: You bet. We won't have the sound for a long time. (S moves back of the lights so R can shoot the next scene in which A goes to the Christmas tree.) S: Count one, two,three before you start shooting and one (slowly) when you finish (so the actors will be ready). (R shoots A and Christmas tree. She sighs every time she finishes. R now shoots the scene in which A goes to her mother, says, "Hello," and kisses her.) R: They did not seem like talking. S: You mean the part where A says, "Hello"? Well, do it again. You don't have to shoot the whole scene, only this part (where A says, "Hello" to mother. R accidentally pushes a button on the camera.) R: What did I do? (R is very anxious.) S: Don't worry. Keep it on 18 frames per second instead of 24. (R continues to direct the actors while S adjusts the lights. R checks the shot list. R notices that if she shoots this scene the way she planned the light will be in the camera's eye. S moves the light and explains to R that she has to consider light placement in the shot list. S adjusts lights to throw more light on the action.) R: What happens if there isn't enough light? S: It will be dark. (R shoots the scene where A is going to the bedroom. R starts to feel more relaxed with the camera.) R (to M): You get the cups now. (R shoots M setting up the table.) S (to R): When you feel more comfortable, we can add new shots. R (responds quickly with an idea): Maybe we should introduce N to the picture. S: How do you want to do it? R: We will show him coming home, yelling "I am home," and then sits on the couch. S: Very good idea.

(11:00) R shoots M with the cups. S (to R): Be careful when you are cutting. S (to M): Stay in the same position. S (continues to speak to R): Imagine the film. Try to keep her in the same position. R: One, two, three. (R shoots M putting the cups on the table and then walking toward the sink.) Cut. (M is still with her hands in the air, part of the walking movement.) R (impatient and angry): M, you were not supposed to go back to the sink. M: You told me to do so. S: That is alright. Calm down. (R shoots M getting an orange from a shelf above the sink. R shoots the next shot in which A is coming in with the doll. R continues to direct.) R: A, are you ready? One, two, three, go. (A walks with the doll from the bedroom to the living room. S: Where was she when you cut? R: There (shows S). S: Fine. (R shoots the scene in which A is talking with her mother. R gives instructions to the actors and directs the whole scene. R shoots M drinking a cup of coffee.) S: Did you think it came out well? R: Uh huh (she nods her head). S: Do you think you have to do it again. R: No. S: What is the next scene? R: N is coming home. M, you can say, "Hi, honey," to N and you (N) can call her whatever you want. (R shoots the scene in which N comes home to the living room where M is sitting on a couch and A on a chair. N goes through the door and sits on the couch.) A: Hi, Dad. S (to R): How did it go? R: I did not see the whole thing. I did not see the talking, but it is not important because they don't have to talk now. S: I think we should show one more shot of them sitting. We will be able to use it later for cutting. (R instructs the actors in order to reshoot the scene.) R: N, you read the newspaper. A, you play with the doll. M, you look through the magazine. (R shoots the scene.) S: Did A look in the camera. R: Yes. S: You have to take the shot again. R (impatient and angry with A): A, don't look at the camera. Look at the doll or play with it (shouting). (R shoots and cuts too soon.) R: Is that good? S: Shoot it again. Count, one one hundred, two one hundred, three one hundred . . . etc. (R sighs.) R: That is gonna be a lot (real time versus film time).

S: No, it is not too long. You used only five seconds and you have three minutes. It takes a long time to film, but it is very short on the film. R (to M, N and A): You guys, don't look at the camera. You can put your legs on the table (N does). A, you play with the doll. (R reshoots the scene.) S: What now? R: A is in bed.

(11:20) The group moves to the bedroom. A is in bed. She is covered with a white sheet on the floor. R is standing on a table, shooting from above. R (to A): Don't look up. S: Hold the camera steady. Take it easy. Don't press it too hard. Now, count slowly. Don't film it too short. (R shoots while counting, 104, 105 . . .) S: How did it look like? R: Good. S: That is good. What is the next shot? R: A is kissing her mother. S: What is the next shot? She is asleep. What follows? R: Could she put on a jacket and then walk? S: Yeah, but that is the last scene for the day. (R and the actors are very disappointed.) S (to R): I want to take the camera to the workshop, so someone will finish the film (the outdoor scenes). R (very disappointed): Why? S: Because we can show it on Monday. R: I don't mind. S: Okay. If you don't care, we will continue on Monday. Clean your stuff. (11:25) R, A and M clean up.

Observer comments. R was the director and the cameraman. She acted independently during the rehearsal and for most of the time during the shooting, although sometimes she asked S for guidance. On the whole, she was very excited and completely absorbed in her task. Twice she became impatient with actors and S had to soothe her. S was the light technician, making all the decisions about lighting.

May 5 - 6. (Monday - Tuesday)

Film being developed. R does not attend.

May 12. (Monday)*

All are in the editing room to see their movie.

(9:55) R: We are going to see our movie. Isn't that great? (R is very excited.) C (Carlos): She really made a good movie (referring to Marion's movie). R (to C): Did you see it? C: Yes. R: Oh, come on let us see the movie. (R is impatient to see the movie.) I got to see A's face. I got to see how it comes in the movie. (R giggles.) This is my movie everybody. (R is really excited and very proud of herself.) This is at least six minutes gone. (Everybody is impatient to see the movie. All counting the seconds: one, two, . . . twenty. S comes into the editing room.) S (to R): It is a bad time because I am working on a grant, so we have to film next Monday. R: But we want to see the movie. S: Of course, but I think it is too much work for C to help you. M: Can we rehearse? S: Of course. (C starts to show the movie. Everyone watches R's movie. R reacts to her movie.) R: I did that again. I should cut it (referring to the panning of the wall). S: It is a nice piece. R (laughs and giggles): Good. Look, good A. Here comes N (laughs).

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* Observer Shohat.

(R's movie is finished.) S: It looks gray (the movie), but it is actually very good. It is only because of the light conditions here, that is all, R, but it is very good. (Everyone continues to view Jessica's movie. End of the first reel.) R: Anything else? C: There is Jason. And Marion's film. R (to C): Can we see it? (C did not answer, being busy with the projector.) R: It was pretty good for a first movie. R (to J, Jason): What is your movie about? J: You will see. (C shows Robin's movie.) R (to C): What is supposed to happen in this movie. C: I don't really know myself. I hoped that Robin would be here. (R is very attentive.) R (to C): When I make the sound for A coming through the door, I have to slam the door, right? C: Yes. A: Can you show R's movie backward? C: I am going to show some movies from Ludlow. It has sound to it, too. R: Great. (After J's movie) R (to C): Are you going to show us movies from Ludlow? (C did not answer.)

(10:20) C shows movie from Ludlow, "Masks for Acting," which is a photograph-type animation. R: Where did they get the music for the movie? D: You look for it from different albums. Didn't you like it? R: That was good. Do you have anything in the order of my film. C: I will show, "The Detective." R: I saw it in the beginning of the year (a little disappointed), but we couldn't see very well. (C shows the movie, "Birds." R watches the film very attentively. She is totally involved and makes hand movements to accompany the music.) C: What (the children who made the movie) did is to go through books and cut pictures and film it. R: That is good. (10:30) C: Now we show "The Detective." It is a good film with good acting. (C projects "The Detective.") R: What happens now (at the point in the movie where there is a little noise at the police station)? C: I don't know whatever happens at the police station. (The end of the movie.) R: Was that their first movie? (C nods his head.) R: Oh, if I could make such a movie. Oh, C, play it backward. C: I will play it a little. You know, R, you have to cut your film. We don't have enough time. R (in a loud voice): I know, I know. C: You need a viewer and splicer. R: I know. C: So why don't you get it?

(10:40) R brings the viewer and the splicer from the closet to the editing room. She looks through the viewer with the help of M and A. R: We can't see it (the movie) here. Let us go outside. C: Outside it is worse. (C goes to Marion who is sitting at the next table.) R (to A, angry): C'mon, watch it. Don't move it (the table). Let me see which part I want to cut. Let us first go through the whole movie. (R watches the film in the viewer.) She walks funny (laughs at A in the movie). Here is N. Here is where we want to cut. (R laughs) (C comes along.) C: I am going to get you a new reel, so you put Jessica's film on it (this reel contained Rose's and Jessica's film). R: Don't go. You have to help. I forgot how to cut. (C helps R with the viewer, then leaves.) C: I'll be back in a second. (C comes back with a reel. R and C look at the viewer.) C: This is your last frame. Cut it here. (R takes the film off the viewer.) C: It goes in the splicer, dull side up. (R puts the film on the splicer with C's help.) C: You have to cut it here in this hole. R: There (points)? C: Yes, bring down the blade. (R does.) Okay, whose film is that (the remainder of the film)? R: This is mine. C: You have to rewind your film and then we put some leader on it. R: And then I will cut the parts I don't want. C: Okay. (C speaks with Marion at the other table. R puts the film back in the viewer. She does this easily without any problems. A and M watch.)

(10:55) C: Go back all the way so we can cut some of the leader. (C cuts the leader.) Put the leader in the back of it (the film) so it will give you more room at the end. (C goes to Marion.) R: C, shall I go all the way to the end? C: Yes. (R tries to add the leader at the end.) R: C, please get here. C: You don't use the blade at this point. Just add it with the splicer (meaning tape it). (R does this and C watches. N holds the film. R grabs it from him. She wants to do everything by herself. She tries to do it by herself but she is not successful.) R: C, can you come here for a second? (C is busy with Marion. R tries again.) Hi, C, I am putting the tape on it. C (looking): It looks good. Just tape it. (R does and sighs.) C: You see this tape? You have to bend it under (R does). R: Is that okay? C: Yes. So, you see, it is not so difficult. Now you have to rewind it. (C goes back to speak to Marion.) R (to M): Do you want to do a part by yourself? M: Yes. (R puts the film back in the viewer. She rewinds it.) R: Now, M, you can start. C: Let me know what you cut before you do it. R: Okay. (C leaves. M moves the film in the viewer. R watches. R gives instructions: Keep going, faster, don't go slow. They find the part they want to splice.) R: C. (C comes.) We found the part we want to cut. Here (shows him). We film twice the pan and we want to cut it. C: Show me both shots. (R shows him.) C: Okay, cut whichever you want. You just don't want both shots. R: Right. (C leaves. R moves the reel slowly in order to find exactly the frame she wants to cut. R marks it.) M: Can we help in splicing? R: You do it next. C: Don't throw away the part that you cut. Put it on the blackboard. R: C, you have to help us. C: No, you can do it. Just remember, dull side up. (R does the splicing by herself while C watches.) R: But where is the other mark? C: You will find it. (M found the second mark. R is trying to cut it.) C: Let us keep the film straight. (C rolls the film on the reel. R cuts the second mark and tries to splice it together. C watches. M glues the unwanted part to the blackboard.) R: Is it right? C: Is it end to end? R: Yes. C: Let me have a look. C (looks): It is okay. (R tapes it. C explains the splicer to A.) C (to A): This tape has to go around the film. R: Let me show her (she does). C: I think it is your last splice for today. You can continue tomorrow and then you can start your rehearsal. R: Can we see it? (R sees the film in the viewer.) C: Of course. (M, R and A watch the film in the viewer.) C: Did it work? R: Yes, it was perfect. C: Okay, let us start putting the things away. C (to R): Put your name on a piece of tape, so we know it is your film.

Observer comments. R was very excited to see her movie. When she saw it she was very proud of herself. She thought the movie was not bad as a first movie. She was also very interested to see other children's movies and to compare them to hers. During the screening of her movie or the other movies, she made some remarks and asked some questions. During the splicing activity, she was fairly independent in deciding what to do, although she needed reassurance from C for each step that she took.

May 13. (Tuesday)*

(9:50) Carlos is showing R how to use the viewer and how to use the editor. R asks the observer for advice as C is now elsewhere. She is using the "Guillotine Super 8 Splicer." She is kneeling on the floor rather than sitting in a chair and working on a desk top. C is back and shows R how to place film on the splicer, lining up the sprockets, etc. With her is her friend, A, who is doing the more mundane work while R is distracted. R is concerned about the tape recorder and the gun mike from the videotape recorder. "Are they recording us?" she asks three times in as many minutes. A seems better prepared to splice as she is actually performing the task for R. R is content to direct the activities and to call for C when she believes it necessary. Splice is complete and they view the film. R is concerned that the film still jumps so that an additional deletion will be necessary. They are joined by a second non-film maker who agrees that "it jumps."

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* Observer 9:50 to 10:05 is Dan Mahony; 10:05 to end of session is Lily Shohat.

(10:05) M, A, and R, all sitting on chairs around the viewer in the editing room, look in the viewer. A moves the reels. R: What happened? R (to A, shouting): Stop it! Stop! A: I don't see anything. R: Don't move it (the table). M: I hate to splice it. I hate it. R: Hi, A. (R laughs, imitating A's manner in the movie.) M: I hate it (splicing). R: I think we will have to do that all over again (the scene where M and A are kissing) because we need to splice it. C, we can't do the third scene. We need you. C'mon, C. C: No, you can do it. M can do it. I mean, A can do it. Why do you need me? M: Yeah, why do you need him for? R: But I am not sure where to start. C: Why? Where do you usually cut? In the beginning, right? You start in the beginning of the scene, where the door opens. (C helps R with the viewer. They go to the beginning of the scene.) C: Let us see how long the shot is (they still go back to the beginning of the scene). R: Oh, here. C: You want before the door opens, right? R: Yeah. C: You can't begin with the door open, right? R: No. C: Okay, so go back, go back . . . as much as you can. Okay, that is the shot of the door, right? (R nods.) C: Let us see how long the shot is, so we want to go back, back . . . to here, where the door is closed, right? (C leaves and works with Jessica with the viewer on another table.) R: A, don't move the table. You are going to move it (the film in the viewer). Is that a good part to splice it? C (comes over and looks): What part is that? When the door is closed and then you go to the end of it, right? R: Uh huh. (C leaves to help Jessica. R tries to cut with the help of M.) R: Hey, C, this is the first . . . C, come here. (They are not sure where to cut.) R: Oh, the splice broke (the film broke in the place where they spliced it yesterday). C: What do you think happened to this splice? (R makes an expression that she does not know.) C: Okay, go ahead and do it (the splicing). I don't want to do it. M: Can I do it? R: Yes. (M cuts the film and tries to tape it. R watches.) R: Press it (helps M). Oh, it did not work. Why did it not work? M, can I do it? M: Okay. R (looks at it): It is okay. We just need to bend the tape. C: How did the splice go? R: Okay. (R looks in the viewer. C watches.) C: What do you want to do? R: I want to cut the second scene. We got the beginning of the scene marked (shows C). C: Keep going. Let us see the end of the scene. R: Right there (points). C: Do you want to cut it? R: Just one frame before. Shall I press it here (to make a mark)? C: Do you want to mark it? R: Yes, it is easier for me. C: Okay. (R marks it.) R: Where is the other mark? M: I will check on the other side. (Both check.)

(10:20) R (getting anxious): Goddam it. (They are looking for the other mark.) Did you find it? M: No. R: C, we can't find the other mark. M: I found it. R: Oh, that is a lot to cut. This film is all twisted. C, how do we untwist it? C: Take one side and rewind it because we can't work with it in this way. (C untwists the film.) R: There is so much film to cut, it will get twisted. (M cuts both ends of the film and they try to tape it.) R: We can cut the hole . . . (tries to explain the process of splicing. C stops here.) C: You know how to do it by now. M (to R): You put the tape. R: C, it is getting twisted again. (C, busy with the others, does not answer. R and M tape it.) R (praying that the splicing works well): Oh, God. (It works. They are going to watch the film from the beginning.) R (disappointed): Oh, C, there are two frames from the other scene (that they were supposed to cut). C (looking): What is this door doing here? R: I am asking you. C: Well, I did not do the splicing. R: Shall we cut these two frames? C: Yes. (C looks in the viewer.) See this hole? We want all of that up to there (shows R) to the end of this splice. (C explains to R and M what to cut.) C: Cut this single frame (shows them) and also here (where the tape is). Are we straight on where to cut? R: No. C: Let me show you again. This part here with two frames of the door (explains it). R: I got it, but we will give you the honor of doing it. (C laughs and gets up to leave.) You got to sit with us. C: No, you can do it by yourself. (M tries to do it. She is not sure.) M: C, get here. R: We are driving him nuts. (C comes over. They show him where they intend to cut. C reassures them.) C: Did you have to call for that? (M and R laugh.) Okay, Find the two frames of the door. (C leaves. R and M look through the viewer again.) A: Can I help? (M, A and R have a discussion over who will do it. Everyone wants to do it, but R is the one who decides to give it to M.) R (shouting): Be careful (with the guillotine). M: You put this fucking thing here. (M gets very angry. She slams her fist on the table.) R: Let me show you. (All look.) R and M: C, get in here (they shout a few times). Goddam it! M: This is not a simple matter like before (cutting the two frames). (R leaves to get C.)

(10:45) They play with a microphone. M: C, we need lots and lots of help. (They just wait for him and once in a while shout: C, come here. A, M and R just sit and wait for C. They play jinks. C arrives.) R: I marked on the wrong place. M: Do we need to cut it? C: Yes, go ahead and cut it. A: Why did you call him if you knew what to do? M: Because I wanted to be sure. (M cuts the film. R and A have a discussion about a friend.) M: R, can you help me? How do I do it? (M is very frustrated. She tries again. She has difficulty positioning the two pieces of the film well.) M: R, I try to put it together. R: Why are you getting so excited, M? M: This is the dull side. Look R, say I do this, but what happens, one is on the bright side and one is on the dull side. R: C, can you come? (M is very frustrated. They are having problems putting the film together and taping it, the last ten minutes.) R: A, this is not funny. (M still tries to do it.) R (to M): You should not do anything until C comes.

(11:00) C: What is the problem? R: She cuts this square because I marked it wrong. M: If I put it, bright with dull? C (looks in the viewer): It is not a problem really if you splice it right. (to M) Cut this part (the door) and splice it together. This is the dull side of that with the dull side of this. (M tries to do it. A and R talk together about some private things while M does the cutting and taping.) R: C. M: We don't need him right now. (C comes over.) C: How are we doing? R: We are all mixed up. C: It is actually three working on it. A: Two of them really. (R is not involved in the splicing at all. She is having a good time with A.) C: You two (M and A) can make an animation film next week, so R can make the splicing. R: But they still have to help me with my movie. C: They are the actresses. R (to M): Do it well. Otherwise I will kill you. Let A do it. M (gets real angry): I have hardly done anything. (A does it. R and M watch.) R: Can I do this part because last time it got messed up (bending the tape over the film). A: Can't I do anything without someone yelling at me? (A is angry. They put the film back in the viewer.) A: Okay. (A claps her hands.) Yea, it is okay. R: But the door is still there. C: A, cut this frame only. R: I am going to do it this time. (M and R look in the viewer for the single frame of the door in order to mark it.) A (defends herself): You did not help me. M: R, can I say something? R: Okay.

M: Since we have only one frame, it is difficult to mark it. We should take it off and cut it. R: Okay. (They take it off and try to cut it. R looks at the film.) R: We want it out. M: No, we want it in. R: Are you sure? (They discuss where to cut it.) R: C, come here, just for a check up. (C comes over. R explains to him the problem and he reassures her.) R: So now we know that at least we will have it right. C, can you take this tape out (they are undoing the earlier splice)? (M takes the tape out.) R: I am going to do it. M: Yes, Mom. (R does it with the help of M. S comes in. They greet her affectionately.) R: We had to do about 50 million cuts and splices. We are finished. (She puts the film in the viewer.) S: Let us look at this part here (where A is kissing her mother). Look at the eyes (A blinks). R: No one will see it. I can't see it. So do we have to cut it? S: Yes. Do you see that is out of focus. This frame has to be cut. R: Do we have to do it today. S: Just take notice of it. Editing helps in the focus of the movie. (They view the movies. R explains to S where they had to cut.) R: This shot of the door is two pieces of film that we had to put together. S: That is interesting. That is a beautiful shot. The light is very good. We will film the rest on Monday.

Observer comments. R was very anxious and frustrated while not working on editing. It seems that she does not like splicing. She has problems in orienting the two pieces of the film together. Editing was a group activity, with M doing most of the work while R was giving orders.

May 19. (Monday)*

Since the prior week Melissa (M) who has been acting the part of the mother has left for Cape Cod. R is very upset. She does not know how to complete her film.

(9:40) S: How do you think you can finish it (the film)? R: Get someone else (to substitute for M)? S: No, what else can you do? A: We need to start all over again. S: No, you can change the story a little bit. (S looks in the script.) Well? She (Simone) wakes up. You have to change it from this point on. R: Oh, that is fine (sarcastically). A: Maybe the mother went on a trip. R: But we need a mother. A: Maybe the mother left for Cape Cod. R (laughs): That is true. S: What else? R: Maybe the mother died. S: Is that what you what you want to do? R: What else? S: Okay, bring your script. (R goes to closet to retrieve the shot list.) R: I don't remember up to what point I shot. S: You did the shot up to the point where A wakes up. R: Can I go and see the film? S: Of course. (9:50) R brings the viewer to the editing room. A and R watch the film. R comes back to S. R: Yes, we filmed up to the point where A wakes up. Shall I call N? S: No, get a piece of paper. We have to change the script. (S goes to the closet and returns with a piece of paper for R. R crosses out shots #9 through #13 in the old shot list. She divides the paper into "shot description" and "type of shot.") S: What did you settle on? R: We don't know. S: We are up to the point where she (A) goes to bed and the mother is gone when she wakes up. R: Maybe the mother went with another man (laughs). S: Go ahead. R: I don't know what to decide. S: So let us discuss the story. A: Is the mother gonna die? R: She's going with another man. S: For what reason? She (the mother) looked happy the other day. R: Okay, we'll change it to something else. S: No. But you have to have a reason for the mother to go with someone else. R: I just like it. S: Okay, but before you decide the shot list, you have to decide about the second half of the story. You have to make it clear in the movie why the mother leaves. What is the relationship between the father and the mother? R: A wakes up and the father tells her they had a fight and the mother left. S: But why with another man? Where did he come from. (R thinks for a while.) R: He (the father) goes to Simone . . . (R stops and thinks for a few seconds) . . . No, she does not run away with another man. Only they had a fight and she left, if that's okay. A: Don't you have to show the parents having a fight? R (very upset): I don't know what to do. S: Let's not make a big deal about it. Maybe the mother got sick. R: Do you know what bothers me? The Christmas time (the fact that it is Christmas). S: Yes, it bothers me, too. R: So maybe we change it. So what about the present. A: So make it a birthday present. S: You know, when we get outside to film, it's going to be summer and not winter. R: Maybe it's an Easter present. (R is getting more upset.) I hate M. Why did she do that to me? Oh! They got a southern divorce (Simone's parents). S: (?) R: I got it! The father sits down in the kitchen and gets a telephone call, and pretends to say yes, yes. A: She dies (the mother) from a heart attack. R: No, stop it. The father gets a message that she won't be there for a month. Then he hangs up and tells A, "Mommy went away and will be back in a month." Or maybe the postman gives him the message. S: Okay, we will see. Why don't you call N? R: How are we gonna fit that part in? S: The father could say that the mother went away or the postman could bring a letter. Call N and bring a telephone (toy). (S asks if R's mother ever went away. R says, no, but that her father went away for good.) (10:07) R and A leave to call N and to get a toy phone.

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* Observer Joy Dryer.

(10:20) N and P (Philip, the postman) arrive. They show P the film. R: That is all we did. We have to do the rest. S, the couch got messed up. S: Well, do you need it? R: Well, no. Okay, what are we gonna do? First shot, her coming out of here and going into there, going into the kitchen. What kind of shot will that be? Can I get the camera? S: Sure. There are ten feet left on Robin's roll. You can use that up. It's better if you have a roll of film so we can send it out to be developed. (R practices filming A as she walks from the living room doorway into the kitchen.) S: Remember if she passes closer than five feet, you've got to pick a place that's further away. (S pauses.) Why are you rehearsing for the acting? Just write that one down. R: But I don't know where I want it. S: Just write down all the shots you're going to take. Why are you rehearsing for the acting so many times? You don't know what shots you want. R: A, come out. We're not doing it (rehearsing). S: Okay, just write down all the shots you're going to take. The first shot, A goes to the kitchen. And then? R: N is sitting there (in the kitchen, going to the table to sit down). P: This is a lot of work, not for R, but for the actors. S: She walks into the kitchen. Cut. Next shot? R: She's sitting down. S: And N will be there. R: And the table will be set with plates. S: Do you need a special angle, say when the phone rings? R: I'm not going to write the type of shot. I'm just going to rehearse and then decide. S: There's lots of ways, a wide shot, a close up, however. You've got to write it down. R: Can't I just shoot it? S: NO! Think of all the different ways to shoot a phone and someone answering it. R: Just a close up. S: These are small spaces. You've got to write it down 'cause you could have all of a sudden just picking it up instead of walking (over to pick it up). Okay, the phone rings. Write that down. R: Close up of phone. (S suggests to R that N and P go back to class until they're needed. P decides to go. N stays.) S: Just write the critical shots. Okay, when following her (A) write panning shot from bedroom to kitchen. R (writes and reads aloud): "Panning from bedroom to kitchen." First shot. Second shot, "Simone going to sit down." Medium from the back of Simone. Okay, I'm not going to be moving with her. S: Medium shot from the back. That's smart. R: Shot number 4. N sits near the table and walks over to the phone. S: What part of N are you going to show? R: All of him. S: I think we'll finish this movie tomorrow. R: Even the outside scene? S: So we can have it back from the lab next week so we can start editing. R: We splice it? And then add the sound? A: Oh, it has to be developed first. How long will it be? Half hour? S: Half hour?!! How much do you think you have now? A: Five minutes? S: Maybe a minute and a half. You have about a half a roll. A: That's all? And how much will there be when we're finished. S: Maybe five minutes. R: The people who make movies for five hours are usually professional. S: There are no movies for five hours. Maybe two hours. R: I saw one movie, "The Sound of Music," that was four hours. S: It can't be. Observer: No, it was about three hours. R: Okay, maybe two and a half to three hours. (10:45) Fire drill sounds.

(10:55) Return from fire drill. S: Let us finish the script. R: The phone rings and the father is going to get the phone. S: What kind of shot is that? (R mentions that yesterday she went to Coney Island. She talks for about a minute.) S: Let us continue. The telephone rings. And the father picks it up and talks. What kind of shot is that? R: A close up. S: Okay, that'll be nice. (R writes it down.) R: The close up shot continues until he puts the phone down. S: Fine. (R writes it down.) S: Then what happened? R: He (the father) will be talking to A. S: How do you do it? (R acts it out, how he'll put the phone down and talk with A.) S: Okay. (R writes it down.) R: Then he walks back to the table and sits down. What kind of shot? Are you going to be here next year? S: I don't know. There'll probably be some film group here. (For a minute they discuss giving R the workshop phone number.) R: Medium from the side. S: Write it down. R: Shall we show her asking where is Mom? Should we? S: That is fine. R(writes, then reads aloud): Number 7. "Simone asking for her mother." S: What kind of shot is that? R: We will show them both talking. What kind of shot is that? S: That's called a two-shot. R: I will write it down and when I film I'll decide what kind of shot. S: Okay. (R thinks for a while.) R: Eight. "Simone is asking for her mother." In that shot we will show him answering her where she went. If that's okay. S: Yes, for sure. R: Okay, what should eight be? S: Does she (A) think it's alright? Does she accept it? (S looks at the old script.) What about shots number 8 and number 9? R: We won't show it because the mother is not here. S: When does the mailman come? R: In the morning. S: Oh, okay. R:"The doorbell rings." (Discussion of how long the shooting will take and special permission to go outside during lunch.) R: Then the mailman brings A a present from her mother? S: Shot at the door? R: That'll be a medium shot, from the front. S: Okay, what else? R: On the tape recorder, do we talk? And then transfer to film? S: No, we put a microphone in the projector and record. R: How do we make "ding dong"? A: Just make a knock at the door. R: Okay. Now Simone opens the door. (She writes it down.) When she goes to open the door should we make her stop in front of it and then open it? S: No, don't stop the camera. R: P will be standing there and cut. S: If you're going to cut, take a new angle.

(11:15) R gets up and acts out the camera position. R: If I take it from here it'll have to be a panning shot. A: Is he gonna be wearing a hat or anything? S: I'll bring my knapsack. R: We can have him saying, "Package for Miss Simone." I'll just put, "Mailman talking." Simone Donald (found last name). Mailman talking and handing the package to her. (R writes it down.) And then she'll close the door. (R gets up and acts it out. She opens the door.) A: She's walking a lot. S: Good point. What can you do if there's a lot of walking. R: She can skip back. S: No, I mean do you have to take a picture of her walking. R: She could be running. S: No, if you're running towards me, I'm sitting here. So those two things are happening at the same time. So You've a choice of taking a picture of you running towards me and the other thing of my waiting for you. (R does not seem to understand.) R: Yeah, he's waiting. S: Right. So you've a choice, of her running or him waiting. So think about that for tomorrow. R: Oh, I'll just put her running. (R pauses.) Long shot from behind. S: Okay, then he's sitting down. R: . . . and show her from the front as if she never stopped. S: Okay and pick her up from the front. (Everyone seems tired.) S: Let's have the mailman wear something. R: What about A's bag? A: That is not mine. That is S's (knapsack). S: Do you want to show the same bag? R: No. S: What about bringing in my laundry bag? A: Write on it, "U. S. Mail." (Bell rings.) R: We only need about two shots more. I will take it home. S: No, do it now, or tomorrow. R: I'll do it now. (R writes, Shot #13, "opening the package.") (S throws jacket over her shoulder, moving toward the door to leave.) R (to S): Wait. What should the next shot be? S: You've got to do it yourself. Think of what the next shot should be. (S leaves. R writes down, "opening out package, taking out the doll and hugging it." Medium from front.) R: That'll be the end.

Observer comments. R was very upset because M left for Cape Cod. R and A thought in terms of substituting someone else for M and therefore they had to shoot the whole movie from the beginning again. It did not occur to them to change the script (conservation of plot). S helped them to arrive at a different solution by asking them questions. The solution reached was the result of teamwork by R and A. R is much more confident about writing the shot list than before, although she still needs the reassurance of S. It is interesting to note R's and A's perceptions of time. A thought that R's movie would last about half an hour, while R thought that professional movies lasted five hours.

Rose's amended shot list looked as follows:

Figure 3

Rose's Amended Shot List

Shot Description	Type of Shot
1. Simone going into kitchen	Panning from bedroom to kitchen

2. Simone going to sit down	Medium from the back of Simone
3. Telephone	Close up
4. Father going to get phone	Panning from chair to phone
5. Father talking on phone	Close up (until he puts phone down)
6. Walking back to table and sitting down	(Medium from side)
7. Simone asking for her mother	Two shot (also father answering)
8. Shot of door	Medium
9. Simone running to get door and opening it	(panning shot)
10. Mail man talking and giving package to her	
11. Simone running into kitchen	Long shot from behind
12. Simone running to chair	Medium from in front
13. Opening the package and taking taking out doll and hugging it	Medium from front

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May 20. (Tuesday)*

R, A and S are ready to leave P.S. 3 to shoot the outside scenes. They take with them a camera and a doll. They look for a nice shop window to put the doll in. They find one at Christopher Street. R puts the doll in the window.

S: We have only ten feet of film left. Let us change the film. (S hands the camera to R who changes the film under the supervision of S.) R: Is that correct? S: Where does the light hit the film? R: Here (points). S: Does the film face the light? R (looking): I have to change the direction (she does). Let us start rehearsal. R (reads from her shot list): "She (A) walks down the street." S: There are a lot of people walking here so you have to tell them to get out of the way. R (to A): Go back. (A walks away from the store.) Keep going. S: It is a very bright day. Look in the camera. See what the light meter reads. (R and S look at the light meter.) R (looking through the camera, to A): Go back. (A could not hear R, so she comes back.) R (to A): You are going to walk, then stop in front of the store and look at the doll in the window. Go all the way back (about fifty feet from the store). R: Are we going to do it now? (S nods her head. A starts walking.) R (shouting): Go back. When I want you to move I will give you a sign with my hand. S: Look through the camera. If you see her walking that is fine, but if you don't see her repeat the scene. (10:02) R gives A a sign to walk. A walks and R shoots the scene. R (to S): Is that too long (too much time for one shot)? (A stops in front of the window.) S: How did it look? R: Pretty good. A (a little anxious): What am I supposed to do? R: Wait a minute. (R looks through the camera at the shop window.) Maybe we should shoot everything again because she (A) was looking at me too much. S: If you want to. A: Where am I supposed to look? (A gets angry.) R (to A): Don't look at the camera. Am I too close (to the shop window)? S: No. (R shoots A looking at the shop window.) R (to A): We are going to start. One, two, three, and then stare at the doll. A: Shall I do that? (A takes a step toward the doll in the shop window.) R: Yes. R (to A): Okay, ready. One, two, three, go. (R shoots.) One, two, three, four. (R stops shooting. She has counted one, two, three before shooting to give A enough time to be ready, and one, two, three, four while she is shooting to time herself.) S: Your hands were shaking when you said, "One, two, three, four," so you may want to shoot it again. R: Okay. S: Take it from a different angle. Do you see the doll? R: Yes, very clearly. R (to A): Don't look at me, no matter what. R (to S): I will count to five while filming. (R shoots, counting, one, two, three, four, five.)

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* Observer Shohat.

(10:07) S and R look at the script. Now they are filming the shot where A walks into a building. R is looking for an entrance into the building. She finds one before the store. R rehearses with the camera. A turns around and enters the building. R: It was sort of panning. S: Did you like it? R: Yes. S: So it is fine. (R shoots the scene where A enters the building.) R: Is that good? S: Did you like it? R: Yes. S: So it is okay. R: A, you can come out (of the building). (S looks through the camera at all the scenes to make sure there are no reflections in the glass window as a result of the bright day. A and R take the doll from the window and thank the lady.) (10:15) End of the shooting of the outdoor scenes.

(10:25) R, A, N and P, the postman, go back to the room at P.S. 3. S: Let us do the post office first. (S and R are making the scene for the post office.) S: This needs some ingenuity. You have to take the shots so close that you won't show the background. Take only their faces (in order that the film viewers do not recognize the place as the same room at P.S. 3.) S: R, how can you change the scene of the dining room? (S whispers something to R about painting. A is busy wrapping the gift.) S: R, start getting your people together for the mailman scene. (R is preparing the U.S. mail bag for the mailman and puts the wrapped gift in it. The bag is too long and she has trouble with it. S is preparing the background scene of the dining room. She hangs a painting.) R: It does not look good (the mail bag). S: You have to figure it out. (10:35) R is having fun with N and P trying to figure out the mail bag problem, but is unable to solve it until S comes along to help. S ties the bag into several knots to make it shorter. R writes, "U. S. Mail" on the bag. R tries to arrange the bag on P's shoulder with the wrapped gift in it. R: S, look. Is that good? S: Yeah. Let go, R. You don't have the rest of the day.

(10:40) S arranges the scenery in the dining room. R has gone to the bathroom. R returns. S (to R): Okay, let us start. Get those people ready. (S is the light man again.) R: I will take the shot from there. (to A): You walk from the bedroom to the dining room where N is and say, "Hi, Dad." A, rehearsal when I say, three. One, two, three, go. (A walks from the bedroom to the dining room and sits down near N, who is reading a newspaper. She says, "Hi, Dad." They rehearse the scene again.) R (to A): Don't look at the camera and don't stare at me. And you, N, say "Hello" to Simone and continue to read the paper. (They rehearse the scene again. R goes to S for advice for the next shot. They rehearse the scene where A answers the telephone. R is the director and the cameraman.) R: When you, N, hang up (the telephone) I will say, cut. (R goes to speak with S.) R: When the telephone rings I will take a close up of the telephone and then you, N, answer. Okay? A: Okay. (They rehearse the scene again. S looks through the camera to make sure everything is okay. They rehearse the telephone scene again.) R (to S): Is that good? S: Yeah. How long more do you have to rehearse before shooting? R: We can shoot the first two scenes. S: Look at everything. I know it is difficult to look at the actors and see the frame at the same time. You need a lot of concentration.

(10:58) R is ready to shoot the first scene. R gives her last instructions to A. R: Don't look at the camera and don't smile. (R shoots the first scene where A goes from the bedroom to the dining room.) S: If you want to do it again take a different angle. (R shoots the part where A looks at N's paper. She counts while shooting, one, two, three, four, five.) R: I am going to rehearse the telephone scene again. How are we going to make the sound of the telephone? S: Don't worry about it. R (to N): Don't move too much when you put back the receiver. First shot of the telephone is a close up and then when N goes there it is a medium shot. S: Very good idea. R (shooting): One, two, three, four, five. R (anxiously): Oh, I took it off (she presses the wrong trigger which stops the shooting). S: Don't worry. Do it again. (R shoots the scene again.) S: Was it good? R: Yeah. S: You know when it is good, so you don't have to ask me. (S and R talk about the scene.) R: I thought I did something wrong. S: You hardly do anything wrong. What is the next shot? R (to A): Just say, "How are you?" S:"How are you" to whom? He just has to hang up and walk to the table. (R shoots the scene. She changes the camera position.) R: We are going to practice the scene when you (A) ask about your mother. Come on, A. (They rehearse the scene.) A: Where is Mom? N: She went for a trip for a month. R (to A): Don't laugh, and look at N. And you, N, don't just read the paper. Have some expression on your face. (They rehearse the scene again. R is not satisfied. They don't have enough expression.) S (to A): Are you surprised (to hear that your mother left)? A: Yes. S: So have some surprised expression. (Another rehearsal.) R (angry): Have a little expression. A: It is not easy. R: It is not difficult either. (Another rehearsal.) R: Have more expression. S (to R): Don't press them too much. They get tired. (R shoots the scene.) R: Shall I do it again? S: What did you feel? R: It was okay. The next scene is of the mail man. (R asks P, the mailman, to go outside.) R: You, A, run to open the door when you hear a knock, and you, P, when I give you a sign say, "There is a package for Simone MacDonald." (S takes care of the light. They rehearse the scene where A walks to open the door.) R: A, open the door all the way. (Another rehearsal. A opens the door and gets a package from the mailman.) R: One more practice. (They practice again. R is the cameraman. She is not satisfied.) R (to P): Wait until she (A) opens the door wide and then start talking. And you (A), when you get the package close the door and don't run too fast because I can't follow you so fast.

(11:20) There are two more rehearsals. R: A, don't look at the camera. S: A, look at the package. R: This is another practice. S: No more practice. A: Only another time. (They practice again. R shoots the scene.) R (angry): You looked at the camera, A. (R stops shooting. R shoots again. She stops again.) R: I couldn't get her. My eye is blurred. It hurts. (R starts shooting again.) R: Good. S: What is the end? A: Shall I hug the gift? R: Yes. And you, N, put the paper away and smile. (11:27) They rehearse the last scene where A opens the gift and hugs the doll. They rehearse. A pretends to open the gift and hug the doll. R: When you see the doll, look at it and then hug it. One, two, three. (R complains about her eye again. She is very tired. R shoots the last scene.) S: I will develop the film and you can use the last ten feet of the other film for titles. (11:33) R and A put everything back in the closet.

Observer comments. R seems to acquire some skill in directing her actors. She is at ease with the camera and quite independent although she still needs reassurance from S for each step that she takes. When R has some difficulty in one scene or another, she asks advice from S. S does not tell R what she should do, but she calls R's attention to certain points that R did not think of. S usually asks some question that leads R to figure out the situation. When R shoots she usually counts, one, two, three, to give her actors time to be ready, and one, two, three, four, and sometimes, five, to time herself.

May 27. (Tuesday)*

R is very disappointed that S did not bring the film. A, too, is very disappointed.

(9:35) S: You can make titles today. R: What do you mean? S: You have to make titles for the movie and shoot them. R: Let us do it now. (S and C are talking, so the observer asks R if she liked the changes in her film or if she would rather have had M.) R: I think it turned out to be rather nice. Observer: Why? R: I don't know. I just like it. (9:40) S comes over. S: Since I am going back today (to the lab) to get it (the film) and I can't come back here, why don't you stop by at the workshop today? R: I don't know if my mother can take me. S: Can you come by yourself? R: I am not sure. I don't know where it is. (S and C explain to R how to get there and what bus to take. S offers to pick R up at the bus station.) R: I will ask my mother if I can come. S: Okay, but try to come. R: Let us do some editing. (S explains again to R the way to get to the workshop. R writes down the address and the directions.) S: I would like you to come there. You can make movies, okay? R: Okay, let us do some editing. (R does not want to promise to come without the permission of her mother, so she does not want to dwell on the subject and tries to change it.) S: Okay. R: You have to help us. S: No, you can do it by yourself. R: Let us do the titles. S: What is the name of the story? R: Presents. S: How do you want to do it? There are a number of ways to do it, on different papers with different colors. R: Can we put it on small papers and let it move? S: You mean animation? R: Yes. S: Sure, do you want to use colored papers? R: But our film is black and white. S: So use black pencil on white paper.

(9:55) R, A and S go to the closet and take big sheets of white paper, scissors and colored pencils. They put them on the table. R tries to divide the work between her and A. R cuts a piece of paper to write letters on. S comes over. S: How do you want to do it? (R shows her.) Write the letters and then cut them out. (S writes the letters and shows them to R. S cuts the sheet of white paper into two halves.) R (to S): Can you sketch the letters for me? S: No, you do it. R: But I can't write so well. S: Do what you can. (10:00) R starts sketching the letters with a black marker. S: Do it with a pencil. R: Why? A: Because then you can erase it. (R sketches with a pencil. S and A look on while R sketches the letters. R sketches the letters T H E with pencil. A sketches P.) A: How is this for a P? (A goes on to sketch also the letter R. R does not like it and she erases it.) S: I am going to make a telephone call. Do you know what you have to do? Make all the letters and all the names. (S leaves. R starts sketching the letter P again and A corrects it a little. A starts sketching the letter R.) R: Make it big, so you can see it. A: Can't you see it? R: No. (R erases it and starts sketching the letter R herself.) A: I started to do the same thing. (R hands the pencil to A, who finishes the word, "Present." R starts filling in the letters T H E with black magic marker. A looks on. R hands the black magic marker to A, who fills in the letter P and goes over the letters R E S E N T. R watches A.) A: Shall I color it (P R E S E N T), too? R: No, I will do it. (R fills in the letters, R E S E N T, and she underlines the letters T H E.) R: Okay, now let us cut it out. (R cuts each letter separately.) R (to A): Now we can move each letter across on the white paper. (A nods her head. S comes over.) R: Is that good? (S nods.) A: Can I cut, too? R: Yeah, but be careful when you cut the letters, R E S E N T (because they are small letters with no space in between). (A cuts the word, P R E S E N T, and starts to cut out each letter. She cuts, P R E S.) R: Let me finish. (R starts cutting.) R (to A): I think we better make another E. A: Why? R: Because I did not have enough space in between. (A makes the letter E and R cuts it out.) A: Are you going to write now, "Rose G . . . . ."? R: Yes. (R starts sketching the word, EDITOR. She doesn't like it. She erases it and writes it again. She also writes the word, ROSE.) A (who is somewhat bored): Can I write"G . . . . ."? R: Yeah, but we have to be careful that it won't show different handwritings. (S comes over.) S: You decided to write yourself as editor. How many times do you want to write your name? R: Only once. S: So why as editor? R: Shall I write only "Rose G . . . . ."? S: Yeah. (R adds BY and she goes over her name with black magic marker.) R (to S): Shall I write "casting"? S: Whatever you like. (R writes, "With help from A . . . S . . ." S (to A): Isn't that nice? (A nods.) R (to S): Did you see the movie, "Liberty"? (S did not see it.) S (to A): Why don't you also come to Ludlow? A: I can't. I have a dentist appointment.

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* Observer Shohat.

(10:25) A cuts the paper with the title, "With help from A . . . S . . ." while R continues to write: Cast M . . . S . . . as - mother A . . . S . . . as - Simone N . . . S . . . as - father P . . . B . . . as - Mailman.) R: Look what we have to cut. A: Get another pair of scissors and we both will cut. (A continues to cut while S leaves to get another pair of scissors.) R: Who else was in the movie? A: Maybe we should add S's name. R: Come on. We made the movie. (S gives R another pair of scissors and leaves. Both A and R are cutting paper.) A: Do you think we will shoot today. R: Depends if we finish. (Both cut and pile the letters. S returns.) R (to S): Those letters are going to be mixed up. S: What do you mean? R: We will have to sort them out later. S: Okay. A: I think I am missing an E. R: Don't worry about it. A: Well, we can use the same letter again after we shoot it. (10:35) R nods. Both R and A continue to cut letters. They cut first vertically and then horizontally and pile them up. A is worried that the letters will get mixed up. R: I know what we should have done. We should have piled them in letter piles. A: You can still do it. (R and A sort out letter piles: Piles of P's, E's, etc. S brings the animation board and camera over while A and R continue sorting.) S: R, the question is where your other film is. If you come today to Ludlow we can see the whole film. R: I don't know where it is. (S goes to the closet to look for it. A and R continue sorting.) A: Where is the S? R: Somewhere. A: It doesn't matter. After we shoot it we can use the same letter over again. R: I know, I know. We are ready. (They finish sorting and both get up and go to S, who has found the film. She speaks with R again about going today to the workshop.)

(10:50) S moves the animation stand to another table. R: This (the camera) is only to look through. (S explains to R how the letters move.) S: Do you remember when you shot 24 frames per second? You do the same thing here. (S continues to explain. R tries to attach the cable release to the camera.) S: Tightening is to the right. Loosening is to the left. (S explains to R that every time you press the cable release it is one frame. R and A press the cable release.) S: When you arrive at 24 it is a second. (S tries to explain focusing to R.) S (to R, who is holding the camera): Look at the building (through the window). Look at a straight line. Look at the chimney. Do you see the little circle in the camera? Put the line of the building into the center of the circle. (S drew it to explain to R how to use split image focusing.) S: Put it so it will line up as in B and not as in A (referring to her drawing). R: I don't understand. S: Pick any edge of any building and tell me what you picked. (R looks through the camera and chooses a building.) S: Do you see the circle in the middle? R: Yes. S: Look, when the building appears straight and sharp, that is in focus. Do you see the difference between this and that? (S moves the focus device. R sees the difference. R tries to explain it again to R by choosing another target, this time the blackboard in the room.) R: It is difficult for me to put it in a straight line in the circle. S: Try. (R tries. She moves the focus ring. R hands the camera to S.) S (looking through the camera): Doesn't it look to you as out of focus? R: My hands are not steady enoguh. (S asks R to choose another target, this time the edge of a window. R tries to focus it. She gets anxious. A doesn't listen. She plays with the scissors on the other side of the room.) R: Here. (R hands the camera to S.) S (looking through the camera): That is much better. It is good. Do you remember that in shooting you have to stay five feet away? R: It is not important here. S: No, you have to stay three feet here.

(11:07) S shows R how to attach the camera to the animation stand. R attaches it. R and A look through the camera. R tries to attach the cable release to the camera. S: The camera has to be 20 inches from the subject. (S shows R how to move the camera. A measures 20 inches with a small ruler.) A: This is about 20 inches. S: You have to do it exactly. (S leaves to fetch a longer ruler from the closet. A measures it again, while R moves the camera with the help of S.) R: This is good enough. S: It is 20 inches. R: Yeah, it is 20 inches. S: Okay. A, why don't you do the focusing this time? (A stands on a chair in order to look through the camera.) S: Do you see the zooming in and out? It has to be on 40. A: How do you know if it is in focus? (S explains to A the point of focusing while R is at the other table preparing all the letters for the first shooting. A does not understand what S means when she talks about focusing and S explains it again. A gets very frustrated. She still does not understand. S explains again.) S: The edge of the ruler should cross the circle. (S explains it on paper on the animation stand.) When it is not broken it is in focus. When it is broken it is out of focus. A gets the idea. R arranges the letters: The Present
by
Rose
G . . . . .)

S: This is taking too much time. R: So maybe you shouldn't explain to A about the focus and we can start shooting. S: We are waiting for you. R: I am ready. (11:25) The bell rings. R: Let us continue because our class is in the park anyway. S: But I have to go. (S explains why.) R: Let us continue for another half hour. S: It is going to take more than one and a half hours. That is why I want you to come to the workshop. Let me explain to you how to arrange the animation. (S moves the animation stand over the floor. She explains to R how to make a frame for shooting.) S: By using the zoom we make the largest area. (S explains and R looks through the camera.) S: Do you see my finger? (S moves her finger across the white paper on the animation stand.) R: Yes, half of it. (S moves the finger across the board and asks R if she sees it. Every time R does not see the finger S makes an X to point out the edge of the frame. S moves the finger in all the four directions of the animation stand.)

(11:30) A moves her finger, instead of S, until R does not see it and A makes an X. A draws lines between the X's to point out the frame, a rectangular frame. S: This is the hardest part of setting up. (A finishes drawing the frame.) S: Look now in the camera if you see the lines. (R looks through.) R: I see a line. S: Which line do you see? (R points out the line to the left, which was on the edge of the animation stand. S erases the line.) S: Do you see any other line? R: No, I don't see any other lines. S: You have this area here (the rectangular frame) to work in. The way you space out, the way they (the letters) move across here is in the same way as when you set your actors in the shots. Do you remember when you had A on one place and N near her? This is the same way that you are going to set this, too. S (to R): Put the letters inside the envelope. Save this paper (where they drew the frame) for next time. (A and R are very tired. A and R put everything in the closet.)

Observer comments. R and A spent most of the time sketching letters for the titles. Toward the end both started to be somewhat bored with it. When S explained to R, and then to A, how to use the focusing apparatus, when the picture is in focus and when it is not, both had difficulty understanding her. S had to explain it a few times before they understood what she meant.

May 28. (Wednesday)*

Rose was not directly observed on this day, but her activities were videotaped and a transcription of that tape follows. The scene is not P.S. 3 (hence the lack of an observer), but is instead the Ludlow workshop. As some parts are inaudible, only excerpts are transcribed.

(4:55) The film containing the outside shots of A have just returned from the lab and R and S have just mounted it on a viewer. S: Okay. It's backward, you know? You know how much brighter it is on the projector than it is on the viewer, so it came out nice and bright. Oh, that's nice, isn't it. See where she stops? (A is walking downstreet in the outdoor shot.) R: Yes. S: Remember this? A little out of focus, a little shaky, right? But for your first film I think it's really nice (shot of doll in window). R: Oh yeah, it isn't connected (the two pieces of film). S: No, no, you've got to watch the film. Don't look at the other one. (S laughs.) R: She smiled! (R is looking at older footage.) S: That's okay. R: Oh. S: You did nice cutting. R: Oh, thank you. Watch. S: That's okay. Oops, see. We'll do that again. That's good. That was really nice. See? R: Yeah, that was good. S: Wasn't that good? It looks nice there. Nice angle, right? Okay, did you see the cut there? Oops, we'll do that one again. R: Yeah. S: When she starts to do it we'll cut . . . well, just before that. That's the end (of the film). R: That was good! S: That's good isn't it? Okay, but think about what you're doing. R: Do I have to take off this? S: Yeah, but that's the beginning, right? Okay, where are you going to attach it? R: Alright, I know. You want this over, starting on this. S: That has to be the beginning. Right. R: What should I do now? S: Okay, this stuff is the leader, right? R: Oh, so I've got to cut it off? S: Right. (R cuts a piece off the roll of leader tape.) Is there only one splicer in here? I think I'll have to get you another splicer. R: Yeah. S: Okay, but this is the, uh . . . your splicer. Okay, I'll go get it. (S leaves and returns.) Okay, this is the second reel, right? R: Yeah. S: Okay. R: It's the one I rewound. S: It's the one you rewound, right? Okay, how, you have the first one, right? Okay, so you'll put it on. Now you can do it yourself. (R winds the film on the viewer.) R: Wait a minute (goes on winding). No, this isn't it. This is the second one, I think. S: Look at it. R: No, it is the first. S: Okay. R: It is . . . I saw it hanging . . . S: Okay, so you have to get to the end of it, right? Why don't you look at it while you're doing it? Do you see it or is the light shining on it? R: Well, no. Ooh, it bends. Watch, look what happens. S: Okay, now, is this the end? R: Uh huh. S: What happened here? Were you looking at it? Is it right? R: I know, that's the end. I'm pretty sure. S: Why does it have that . . . Okay. R: Let's see. Yeah, she's (A's) on the bed (referring to a shot near the end of the film). S: Okay, okay, so look . . . um. This is the beginning of the second, right? Okay, we've got to join them. R: We've got to cut the film there? S: Find the last good frame there and the first good frame here. R: They're all good! S: Yeah, those are all good. Okay, then cut this and splice it. R: Should I splice it right here? S: Yes. We'll have to take a look on both sides, okay? R: Oh, it didn't cut. S: That's right. R: Right here? S: Yes. (S consults with Jerry Landhal on an editing problem for about 40 seconds, then she returns to R.) R: Is this the place right here? S: Now what you're supposed to do here is find the . . . You see how these things jump up? R: Yeah, I've got to cut that. Oh, right there. (For two minutes S and R do not speak.)

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* The transcriber is F. Eadie.

(4:53) R (calling loudly): S! (S responds about 30 seconds later.) S: Did you make the splice? R: Yeah, I made the cut. S: Did you stick it together? R: No. S: Oh, well do that. Look. Right there and I've got to cut it right . . . there, and . . . Oh, oh, wait a minute. What are you doing? This, you're throwing away? R: Yeah. S: Good. R: No, like this side, like that. (There is a pause of about 40 seconds.) S: How long did it take you to get here? R: Uh, about fifteen minutes. S: It probably didn't take more than about ten minutes after you were on the bus. (S and R discuss getting to the workshop. S then has a discussion with Jerry Landhal about editing in general.) R: I can't find the end (of the first piece of film). Where is it? S: What are you doing this summer? R: Going to . . . this summer? S: Uh huh. R: To Portugal. S: You're going to Portugal? R: Yeah. S: How are you getting there? R: We're going to share a house with another family. S: You're sharing a house with another family? R: Uh huh. S: Oh, that's a good idea. R: Yeah, so we don't have to pay much. S: Your mother and a friend? (S and R both talk at the same time.) R: The only one I've got. She's like mine to play with.

S: Good. R: Should I take that by that? S: Uh huh. R: Okay Is this a frame? S: No, it's the same width, right? R: Right. (There are sounds of using the splicer for about one minute.) S: Cut that? R: It didn't cut. S: Okay. Let's start it over again. And now your editing begins. (S says this dramatically, then laughs.) That looks nice.

(4:58) The film reels are turned rapidly. S: This looks nice, too, doesn't it? Yeah, that was part of the second roll (of film). (The film reels are turned again.) JL (Jerry Landhal): Ah, nice. (S and JL chuckle appreciatively, possibly at the repeated shots of the same action.) R: Aw, oh, I think I went the wrong way. S: All right. R: Right here. (S and JL start a discussion with another staff member which lasts approximately 35 seconds.) S: Are you looking at it? R, are you? R: (?) S: Can you see it? R: Uh huh. S: Well, get yourself in a place where you can see it. R: No. S: What? R: Ain't right. S: Well, that's the first thing you have to do. R: Nope. What do I have to do? S: At the beginning. Put it at the beginning of the movie. R: Oh, where's the beginning? S: Where is the beginning? What is the beginning? Do you remember? R: Now what do I do? (R pauses.) Too bad A can't see the movie. S: Oh. She'll see it Monday. R: She can't. S: Oh, no. A has gone away. When you get to the beginning of the part, cut it out and put it over here. Do you have it? R: No, it's not here yet, but there. I'll cut it up. (R pauses.) Right there. S: Okay. R: Mark it. S: Go ahead. (S pauses.) Right. R: Would you do it for me? S: No. Okay, now why don't you wind that by hand. Just before that . . . R: Yeah, first I've got to . . . No, this thing . . . (R taps on something, perhaps the viewer light shield.) S: Yeah, that gets hot, too. It's the stupidest design I've ever seen. Burns your fingers. R: You'd think they'd put it on the side. (S and JL discuss closing the door.) R: Okay. (R pauses.) Now I've got to find the . . . where I want to stop. (She pauses.) Where do I want to . . . um . . . Where am I stopping the cut? (R uses a plaintive voice.) S: Where are you stopping the cut? R: At the end of the thing. S: End of what? R: At the end of this . . . at the end of the cut. S: The first part of the movie is . . . (S pauses, expecting R to complete the sentence). The girl . . . (prompting R). R: The girl walking down the road and the girl going into the "toy market." S: Okay. R: So that's where I want it when it gets to the end of that. S: The end of what? Come on, you know. Look through it. See . . . (R interrupts.) R: I'll show you what I mean. S: Okay, good, 'cause I think you really know. R: She has a good expression. I did that twice. Oh, yeah. S: What? Now look. What are you . . . What, what are you doing? You're trying to put some part of the beginning of the movie. You're trying . . . We shot the titles already, right? (S pauses.) Okay. First thing happened in the movie was the girl . . . Yeah, it was covered. You have your scripts here, but we can do it from memory. R: She's walking down a block. S: Right. R: And then she walked back into the window . . . the . . . S: The door. R: Yeah, and then cut. S: Okay, good. (R and S both talk at once.) R: Yeah . . . S: That part where . . . (S talks to someone else about their film. This conversation continues for about 30 seconds before R interrupts.) R: Should I start it where the door shuts? Right where the door shot ends? S: Start with? R: I end the cut where the door shot ends? S: Uh huh. Are they the last frame that the door shot? R: Yeah. S: Good. Now, may I ask you a question? This part here, where she's coming around . . . No, that's where she's backing up, right? R: Yeah. S: Okay, fine. (S pauses.) Perfect. Now look, you made these marks, right? R: Uh huh. S: Where's the blank reel, or there was a blank reel I'm thinking about. Where did it go? R: Here. S: That's not blank. R(after a brief pause): What do you mean? (There is a longer pause.) You mean just a blank reel? S: Yes. R: We used it, didn't we? S: Why? Where did we use it? (R and S look around the editing room for the reel.) R: What are we going to use it for? S: You found . . . Did you find it? (S and R return to the viewer to edit.) S: Yeah. Oh. Um. We have to remove this part here and replace it, right? (S pauses.) Okay, give it to me and I'll hold it. You can put it up on the wall. R: Should I put it . . . should I put? S: Right. You have to replace, change the order, right? R: Okay. I've got to find the other mark. S: Okay. R: Oh! What's that? (S does not respond, but a few seconds later someone else does make a comment and S responds to him. They have a brief interchange.) S: Okay, let me go finish. (to R): Good. R: Here's the first. S: The first mark? R: Uh huh. The first mark. This, this is last mark (said hesitantly, as if she is uncertain). S: Is this the last frome of the door? (S pauses.) Okay, just cut it there. R: Should I? S: Yeah, just do it. (S speaks briefly with someone else.) S (to R): Okay, what are you going to splice there? (S speaks briefly to a child who is leaving.) What are you going to splice there? (S pauses.) You're cutting there, right? R: I'm cutting there. S: Okay. R: Right there? Well, should it be out? S: Yeah, just bring it back. There. R: I don't think we should have cut that thing. S: Do you know what I think? R: What? S: We should save these two frames. R: That was what I was thinking. S: Okay.

S has a discussion with JL on a number of topics. R (to herself, while working): Okay . . . There . . . Where is . . . ? Oh, now I've got to look . . . I've got to find the other mark. I can't find it . . . (R fades out as if asking for sympathy or help. There is a long pause.) It can't be on that side . . . S: Where is it? R: I don't know. (R pauses.) If I was turning it this way . . . S: Yes. R: What? S: Okay. (Someone comes in looking for the projector and S spends about 30 seconds trying to help him.) S: Okay, so where's the other mark? This is the end of the shot. Where's the beginning of it? Watch what you're doing. Okay, where's the beginning? R: I was turning this way. S: Yes. R: It has to be on this side. S: Look. (There is 12 seconds of silence while R looks along the film for the second mark indicating the end of the section to be deleted.) S: And what are those . . . ? (There is another 12 seconds of silence.) S: What are those pictures of? R (after a 7 second pause): Pictures? . . . Here it comes. S: What's that? R: Here, it's come now. (R pauses.) Here's the bed scene. S: The bed scene? I don't believe it. Come on. Come sit here and look. R: (?) (R sounds disgruntled. S has a 45 second discussion with another student while R looks through her film.) R: That's not the bed scene. S: No. R: I can't find it. S: Come on, now, figure it out. What . . . This piece is in the middle, right? (S pauses.) Um. And you're looking for the beginning of this piece. R: Uh huh. S: Where's the beginning . . ? R (breaks in): On this side. (R pauses.) Why didn't you tell me? S: Why should I? R: 'Cause I missed. S: You missed what? All you did was worry about it for five minutes and then you figured it out yourself, right? (S pauses.) If I tell you, you wouldn't have learned yourself. Good. R: Can you see it? S: I'm not looking. R: (?) S: You can feel it as it goes by (the mark on the film). Look at it in the viewer, R. R: I forget where it was. S: What are you looking for? R: I'm looking for the bed . . . Nope. (There is a 10 second pause.) S: I wonder what's going on out there (referring to noise outside the room)? (R explains the noises as kids working.) S: Okay, let's "play" it. R: Oh, thank you. (There is a long pause.) Put that there. (There is a 12 second pause.) S: Is she still outside (referring to A in the film)? R: Yeah. S: Okay. Let's go. (There is a 20 second pause.) R: Oh, I see. S: There it is. . . Oh, where does this go? (Fifty-five seconds pass during whidh S has a brief discussion with womeone else at a distance.)

(5:13) R: Here it is. S: Good. Is it the mark? R: Yeah. S: Okay. Now, end it. (There is a pause.) R: Cut it? S: Uh huh. R: Should the spot (mark) be out of it? Out here on . . . ? S: Um. (S pauses.) You don't rid of it no matter what, so, um . . . R: Put it in. S: Inside(referring to the location of the mark on the splicer prior to cutting). Okay. (There is a 10 second pause.) R: Um . . . That's the whole cut? (R is trying to get S's attention.) S: That's the beginning. R: Here, right? (R and S both talk at once.) S: That's the beginning, right? R: Yes. So now what do we do? S: The beginning, right? Um . . . Well, these pieces fit together, right? (R and S continue to discuss the editing.) R: So I've got to put these together first? S: Right, and um . . . This is the beginning of the movie. R: This is the door. S: Good. Is that, is that the door? Where's the door? Huh? R: Sleeping. S: Okay, now what's on the other side? Look at this. The beginning of the movie. Try and make the splice, okay. R: Wait a minute. Come here. S (going out the door): No. I'll be right back. (5:18) The tape recorder is turned off by someone who discovered it unattended. R left the editing room shortly after S.

(5:30) S turns on the recorder again as she and R view rushes from Paul Voss's new film. S and Paul discuss the film and comment on the various shots. She discusses various production problems with P. R is working at the splicer. R: So, am I attaching these now? S: Are they in the right place? R: Um . . . Yeah. It's too hard. S: What? (R is talking about the door scene she is working on.) R: Here is the door of the house. S: Door of the house? (S asks P to put away the projector. He is not happy about it.) S (to R): Looks okay, right? R: Yeah. S: Good, good. Let's put things away. R: Okay. S: We try to . . . (S is distracted by another conversation which lasts about 55 seconds.) We try to close up around six. R: Okay. S: Okay. What are you doing tomorrow? Can you come tomorrow? Okay, then. R: I'll see you sometime tomorrow. S: Good. You'll come in then and we can, you know, edit.

May 29. (Thursday)*

The following material was prepared from sporadic observation and a continually running taperecorder. The day is not completed. The scene is again the workshop at Ludlow.

(4:05) R and A arrive. They are impatient to look at R's film and start editing. They were unable to start because the equipment cabinet was locked and no one present had the key. R was noticeably frustrated. S and R introduce JL (Jerry Landhal) and others to A. There was little discussion of R's film. (4:12) CB (Carlos Baez) arrives with the keys. R and A quickly get the film and head for the editing room. O (the observer) gets the taperecorder and follows. O starts the tape running in the editing room. (4:14) R accuses O of unplugging her viewer when plugging in the recorder. O: I didn't either. R: Than why isn't the light on? O: It is, isn't it? Turn it on. It may have burned out. (O is trying to avoid taking responsibility.) R: No, I think you did it. O: You think I did it, huh? Well, let me check to be sure. (Much checking of wires and plugs follows.) A: That's right. You did undo it (said in an accusing voice). (There is more checking going on during the conversation.) R (to A): Close the door. (A does so. The viewer is now working and R starts looking at her film, which she had already mounted on the viewer.) R: That was nice like that. A: Well, it won't stay closed (the door). (A comes over and watches.) O: What's wrong? A: The picture won't come in. R: There. A: You got it? R: Where is it? (R is looking for the beginning of the film.) O: It's sure not very bright, is it? A: It's not a very good picture. R: I know. (to someone in the room): Please close the door. O: That, that might be . . . PR (Pedro Rivera, comes in , interrupting): Are you watching any more (the projector which is in the room)? R: No. (O and PR discuss the use of the projector.) R: Could you close the door? (R and A are back to the film. O suggests using a different viewer.) R: Okay. A: Well, let's unplug that one now. (O agrees and a switch is made. R has trouble mounting the film.) A: It goes under this thing. R: I know. (R is very annoyed.) Okay. Now (solving her problem). A (seeing the first scene of herself walking down the street): Whose film is this? (A pauses.) Who's that? (She pauses.) Oh! (R starts to say something.) A: Is this the whole film? (4:17) R (with obvious exasperation): Yes! A: From the beginning? R (more exasperated): Yes! A: This is not . . . Then how come it's right here? R (still exasperated): 'Cause that's the beginning. A (less sure of herself than before): That's not the beginning of the film. R: It is, too. I'll make you a bet (said almost triumphantly). A: In the beginning of the film . . . R (interrupting): In the beginning you're come . . . A: I'm coming out of the house. R: You're coming home from school, dope! A: In the beginning? Oh, yeah. (There is a silence as both look at the first shot of the film.)

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* Observer is F. Eadie.

A: That one . . . R (interrupting): Look at the cars in the background (said with obvious pleasure). (One of the girls giggles.) A: That's silly. R: He . . . his hand very lightly over that, very lightly (reference unknown here). A (in a babyish voice, giggling): He shifts his hand. Stella Flowers (possibly a sign in the film or the name of the doll). (There is a six second silence.) A: You can't see the doll very well, can you? R: Yeah. (A gets one point.) A: It looks like she has a hat on (possible reference to the doll). R: She does. A: I mean a big pony-tail. (There is a five second pause.) R: Now watch, you're going to have a big jean jacket on now. A (rather disdainfully): R. (A laughs. R is referring to the fact that A's costume changes between the scene at the store and the scene of her arrival home.) A: Kind of messed up. (There is a seven second pause.) A (in baby talk): Hello, Mommy (looking at shot of her kissing the mother). (There is a four second pause.) A: See, I have to see the end of this. I swear (being flirtatious). Please close the door (said imperiously). It is better with the door closed. A (in baby talk again): Mom, I haven't any doll. Could you please . . . ? (There is a four second pause.) Can't see it now. (There is another four second pause.) A (in a little girl voice): Hi, Dad. (A giggles.) (There is a three second pause.) A: Can I come in (a line from the script)? Is this jump (a cut)? R (archly): No. A: Oh, 'cause before I know that it had a jump cut. R: 'Cause we cut it. A: Yeah, right. R (in a stilted voice): Here you are in the morning. (There is a three second pause.) Watch then . . . watch when you peek over. You're going to see yourself smile. (There is a three second pause.) Did you see? A: A little bit (grudgingly acknowledging R's point.. R: Yeah, you went . . . (R demonstrates. There is a seven second silence.) A (again in an impervious voice): Please close the door! R: It's okay. (There is a six second pause.) R (softly, to herself): There's nothing there. (There is a thirteen second silence.) A: Boy, did you see this? I mean, the one where I get the doll? R: We did that twice . . . three . . . three times. A (warmly as if noting a shared problem): Four times, then. (There is a seventeen second pause.) A: Oh, shit! I don't think the movie . . . R: Okay? A: Oh . . .

(4:21) R laughs. A (laughing, but with mock seriousness): What's so funny? Want to rewind it fast and let's see what it looks like. (Both girls seem to be pleased with their work, but they are not admitting it directly.) R: Okay, you want a . . . Yeah, okay. (There is 19 seconds of rewinding film. Both girls sigh.) A: You wish M (the actress who played the mother) was here? R: Why? (There is a 24 second silence while R takes the reel off the editor or looks for a splicer, and another 14 seconds of rewinding the film, during which one of the girls giggles.) A: We'll use that camera, I mean that whatever, after that film is done. We'll use the camera after him, whatever . . . I mean . . . projector. How do they get copies of this? R: Look at the jump cut (chortling). Now we got to do the editing. Let's go get the splicer. (R sounds very business-like. She heads out the door.) R: Come on, A. (A's accusation apparently angered R. A appears uncomfortable. R and A look for a splicer in the back room and return without finding one. R notices a splicer on the table and asks J (Jonathan), who is sitting at the table, "Are you using that?") J: Yeah, I will be in just a minute. O: There are . . . Where is some other splicer? PR: Yeah, I'll get one right now. Let me just . . . (PR is cut off by another film maker and he gets involved in this conversation. The tape recorder is turned off. R and A watch Victor's film, "The Briefcase," which is being projected in the editing room. S arrives with a splicer. R sets up the film on the viewer and splicer ready to edit.) R (to S): Should we do the first splice? (S is involved in a discussion of who gets to use the projector for dubbing. R tries to get S's attention, at first without success. Finally, S listens to R.) R: First we . . . instead of waiting until I finished shooting. Instead of just saying, one, two, three . . . S (interrupts R): It's hard to describe it. Let me look at it. Alright? It sounds like you should cut it. How about turning the light on? I can't see it. R: Oh, yeah. (There is an eleven second pause while they look at the film.) S: Wait a second, R. You're going too quickly . . . (A asks O a question about showing films.) R: There! S: Okay, that's what I mean, by going so quickly you miss the frame. Okay? R: Okay. Just a minute. (There is an 18 second pause.) S: Oh, whoops. Okay, now, start to see . . . R: Right there . . .

This transcript is incomplete, ending about 4:30.

June 2. (Monday)*

The editing process not completed on May 29th is continued at P.S. 3.

(10:15) R, A and S are viewing R's unedited film. R: S, where shall I start splicing? S: See where you want to cut. R: Shall I find the last frame where she's standing still. S: Yeah. R: It's right on the splice. S: Take the one on the outside (cut on the outside of the splice). This film was made at 18 (frames per second). R: What's the difference? S: You get more time with 18. You've got to remember when you project it. (R looks at the film, deciding where to cut.) R: We don't want it to look like she (A in film) knows where she'll walk (A looking into store windows). S: She's standing in front of the window and then you said, "Go." (A is supposed to look as if she's browsing.) R: Right. There is my splice. S: Okay, where do you want to make the cut to? You want to get rid of this tape. (R is confused about the mark she made.) S: Find out what frame it is. Instead of asking first, think about whether you want that hole in the film. (S is working with

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* Observer is F. Eadie.

A, who is writing a script.) S: You you going to cut out characters? A: It depends if I can draw or not. S: There are different kinds of animations. (S shows A her Young Filmakers book on animation, a picture of a hand that becomes a dove and flies away.) This girl (who did the hand film) probably drew one thousand drawings. I suggest you draw the backgrounds and then the drawings of the characters. We shoot frames like we did with the titles. First you write the story, then we'll turn it into a shooting script.

S returns to the editing room with R. S: Now look very slowly over this because the important thing is to get the idea yourself. R: What happens if I don't like what I did? S: Don't worry. It's usually not ruined. But you can't save everything. It can always be repaired. R: There's a little jump there (between shots). S: Right, 'cause you first use the camera it jerks when you start. Just remember, you cut on the last good frame and on the first good frame of the next shot. Run at regular speed to get the motion, then slowly to find where you want to cut (referring to hand cranking the reels through the editor). You've got to do it smooth to get the feel of the motion (of the action on the film). You want smooth camera work. R: I see. I cut it to keep the smooth part. S: You've got to get the feel of it (turning the reels). R: Okay, I cut that part out, right? S: I just made a big mistake (with a private film she's making). And I'd spent money on it, too. R: Did you feel like killing yourself? S: Well, at first. But you feel like you're growing when you risk something. (R cuts. S leaves the editing room and then returns.) R: That was good (referring to the jump she cut out). R (continues looking): Right there? S: Yes. R: This is getting easier. S: Sure. R: The splice is going to get cut out. S: That's okay. You don't need it. (S and R discuss the fact that R's mother likes the arrangement of R going to Ludlow and R making films.) R: What could happen if you forgot to put the tape down? S: It wouldn't splice. Look how much more comfortable you are with making a movie. R: Right here (cut here)? S: Absolutely. The more comfortable you are with these simple steps, the more complicated you can get (in making a movie). R: So you take the last good frame . . . and cut to the next good frame. S: Right. And before, you took one whole shot and moved it. You can do almost anything after you get used to the basic equipment. Some people do everything all at once (in editing their film), but you're doing a lot of little cleaning up. A (to R): How much did you cut out? R: A lot. Oh, just three splices. (R lets A splice after R marks the frames to be taken out. The bell rings. R puts the editing equipment away.)

June 9. (Monday)*

The editing of R's film continues.

(9:58) R and S are setting up the projector in the editing room to look at R's film. R: Shall I put it like this (points to the edge of the film just as it enters the projector)? S: Look at the machine. How does the edge (of the film) look? R: Is that the way to do it? S: Don't ask me. Just do it. (R successfully puts the film into the projector. They view the film.) S (while viewing the film): I think you can finish the editing today. We had a really good start. (after the film is over): Do you have an idea on things you have to cut? R: Yeah. (S rewinds the film.) R: Can we go backwards (view the film backwards)? S: The machine can do it, but it's not good for the film. Wait till you get a print.

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* Observer is Joy Dryer.

(10:05) R rewinds the film without any problem. R (to S): Leave the projector here so I can look at the film after I finish splicing. (S leaves.) (10:10) R views her film through the viewer. S returns. R: S, where shall I do my first splice? S: I'm not going to tell you. Do it by yourself. I'm just going to bring a chair and sit here. I'm not going to tell you. R: Do you think that is good (scene of A walking down street)? S: Yeah. R: I thought so, too. (R continues looking in the viewer.) S: You always cut at the last good frame. R: Right here (scene where film jumps from a pan of the kitchen wall to A entering the kitchen)? (R makes marks and readies herself to make the first splice.) S: Before we go today let us look at the letters (for the titles). R: Okay. S: Do you think the letters are good? R: No, they are too small. (R cuts the film at the mark points with no problem and splices.) R: It doesn't look very good. (She shows S.) S: That can happen, so do it again. (R redoes the splice.) S: Did you cut it again (the film)? R: No. S: You have to cut both sides (both ends of the film) off because they weren't straight. That's the reason it didn't work. (R cuts again and shows S.) R: It's not straight. (S looks at the splicer.) S: Maybe I'll tape it. It's cheaply made (the cutting board is loose and moves around).

(10:20) S repairs the splicer by taping it and hands it to R. R tries the splice again. R: I always forget to do this (put the guillotine part of the splicer down in the rest position before taping). (R splices well and continues to watch the film in the viewer.) S: How about that (watching A entering room, back to camera, turn left and walk out of room)? R: I've got to cut it out, the first three frames, because she blinks. S: It's not her eyes. It's also the speed she's walking. It's the movement. Although you shoot it in a different time (18 frames per second) you have to keep the speed (of the movement) moving. R (talking to herself while trying to mark the scene): That's not . . . right here. S: It's interesting how the movement is divided up. When you have 16 mm, it has a separate magnetic strip for the sound, and there's lots of frames between each word. I recorded the ABC announcer off the radio -- you know how fast they talk — and there were no frames between words. R (responding to a question asked by S): I cut it out last week. S: Right, it's called a rough cut. (S makes an analogy between the first draft of writing a paper and the rough cutting of a film. R cuts the film. S looks at a small piece and counts the frames.) S: Eighteen . . . Just a second (of film at 18 frames per second). (R also counts the frames on a second piece, also 18.) R: This is another second. (R is splicing with no trouble. She is able to talk while splicing. She asks about someone who is going to show his first film at Ludlow. S says his film is too long.) R: An hour? S: Oh, no. It's about 18 minutes. He should have edited it more. R: Is that good (the splice)? S: Yeah. (10:35) Fire drill sounds. S (to Jason, J): You said you had two stories, but one film. J: No, I had two bombs so I thought it was two stories. S: But it's still one film? J (tentatively): Yeah.

(11:00) R has returned to the viewer. R: Hey, look at this. S: What is happening? Go ahead. You can never tell by an isolated picture. You can only tell in relation to the other pictures. You have to view the whole scene. R: I have to cut here a lot. S: That's a tricky one. Let's see what you can do. Some things you can fix, some not. It's a first film. R: Oops. (They are looking at the scene where A comes out from around a left corner and walks right. There is a jump cut to A walking in the middle of the scene.) R: Cut there. (R cuts the film successfully.) S: He (Ken) is asking J if the film looks the way you thought it would look. R (shaking her head): First of all, I didn't think you'd have to work so hard. S: But how did it look? Were you surprised? R: Yeah. S: Where? R: I thought it (the shots) would be perfect. S: But did it look the way you imagined it would look when you shot in the camera? R: Yes. With professional film makers, what if they want to cut out something? S: Basically they do the same thing, but maybe one hundred people take part. Different people take responsibility for different parts. You did the story, the camerawork, the editing . . . R: Where is the part of the film that I cut? S: I don't know. (They look for it and find it.) S: These are called out-takes. Some people make movies out of out-takes. R (asks incredulously): Out of these (referring to how short they are)? S: Well, these are mistakes, but sometimes someone will take the scene done over several times and choose the best one, so you've got a choice. If you have a lot of them (out-takes) you can do interesting things with it. (S makes a circular motion with her arms.)

(11:12) R is looking through the viewer. S: Go ahead. Let's look at the whole thing before you decide what to cut to. R: There? (R is turning the reels back and forth just a little bit.) S: Look at the whole section of M putting the cups on the table and think of the whole thing, not just one shot after the next. R (looking at the scene about three times): Should I cut out this section? S: Oh, my God, that's pretty drastic. R: Move it around? S: I don't know. Let's look at it. Sometimes it's good to look at a section, to view the whole. R: Right here? S: Go ahead. You said that you know what you want. (R marks the film where M is near the counter. R views the scene three or four times.) R: Where's the mark? S: Don't worry about it. You can always see it and feel it. Just keep it in motion. (S walks and pantomimes reaching for cups.) S: That's important to make the right choice. R: I found two holes (cut marks). S: Where are you cutting to? R: I don't know. S: Make sure you're cutting the right thing. R: It's not important. Both are good. (S and R look for the second mark.) S: Maybe you didn't make it. R: I thought I did. (S keeps looking, finds it by feeling with her fingers.) S: Tiny little hole. Press harder. R: Let me cut it now before I lose it. (R puts the film into the viewer, then presses harder on second mark.) S: Do you know what I'll bring tomorrow? R: What? S: Black construction paper. Then you can cut out your letters and put it on white paper so you don't have to go over it with black magic marker. R: Here's the other one (mark). S: Okay, cut there (the second mark). It'll make the film weak (if you leave the first mark in) and might tear when it goes into the lab. (R shows S the splice.) R: Do you think there's too much space (between the ends of the film)? (S leaves. A comes over.) A: How much did you do today? R: I did four splices today. (S returns. She asks R is she can come to Ludlow on Thursday to hear S's roommate talk about the costimes she makes. S tells R that her splice looks fine. R tapes the out-takes to the blackboard.)

Observer comments. R is more independent than before in deciding what scene to cut out in editing although she does not take any step without the reassurance of S. R masters the "art" of splicing. She has no problem with it at all, although she still needs S's reassurance, but this time only after the splicing has been done. S tries to push R to be more independent. It is interesting to note that R has no concept of "time." When S mentioned that the film of one of the boys at Ludlow was too long and he should have edited it more, R thought that the film was an hour long, although it was only eighteen minutes long.

June 10. (Tuesday)*

R is going to work on letter drawing for the titles.

(9:43) S: Do you want to have all the letters at the same time and in the same frame or do you want to use the same letters again? R: What do you mean? S: Do you want to have the title of the movie by Rose G . . . . . with A on one frame or each word on one frame? R: I don't like one title at the same time in the same frame. S: So why don't you do a good alphabet. I will bring you a ruler. (S gives R a ruler.) R: How big shall I make the letters? S: We should finish the titles today so we can get the film back from the lab on time. R: S, should I make this size (about three inches)? (R draws a straight line on a yellow paper and tries to draw the letters. She draws A and B.) R: S, I can't make them good. (R is very anxious.) Could you do it for me? S: No. R: Weren't they supposed to be black paper on white? S: Yes, that is the reason I brought black paper. R: So why am I doing it on this paper (yellow paper)? S: You can do it on this paper and then cut the yellow and black together, or you can do it straight on the black. R: I want to do it on black paper. (R starts to draw on the black construction paper.) R: I can't see anything (pencil drawing on black paper). (She gets up and brings an orange color pencil from the closet. She starts to draw A, B, C, D.) R: Is that good? S: Yeah. (R draws E, F, in larger size that A, B, C, D.) R: They come out quite good. S: Yeah, but R, keep larger spaces between the letters so you can cut them. (R draws the letters up to the letter J in even larger size.) R: I'm going to start cutting the letters and then I am going to draw some more, okay? S: Okay.

(10:00) R starts cutting. She is quite bored with it. R: S, the letters get bigger after the letter D. S: That is the reason I suggest that you draw lines. R: Can I color the letters in orange? S: I thought that you wanted to shoot black and white. R: This is not turning out very well. S: What is wrong? R: The letters look crooked. They are too big. S: You have to use a ruler. (S draws one line with a ruler.) S: Draw the second line with a distance of two inches. How wide do you want the letters? R: I don't know. S: We will make it two and a half inches wide. (S draws the second line and a box, then draws the letter A inside the first box. R draws the letter B and starts to draw the letter C.) S: Don't be sloppy. Draw first the box. (R draws the box first, erases the letter C, then draws the letters C, D, E and F.) R: It doesn't look very good. S: It is really looking much better, R. Make your hand loose. (R draws the letter G.) R: Is that good? It doesn't look good. S: It is getting much better. Just loosen your hand. R: No, I am good only at erasing. How come A gets to show everything (A is showing children from J's class who have come to see movies how to splice)? S: Do you want to show it? R: No, I am busy. (R draws the letters H and I.)

(10:25) R and S start cutting. R starts drawing while S continues to cut. R draws the lines and the boxes first. R: They really look better (the letters that were cut). (R draws the letter J.) R: Oh, K, how do I draw K? (S shows R how to draw K on a separate sheet of paper. R tries to draw K.) R: I can't draw K. Can you draw K for me, please? Only this time. S: No, just loosen up. (S shows R how to draw K again. R tries to draw K again.) R: S, can you do it for me? S: No, try again. (R is bored. She gets up and looks at A's drawings. She comes back and draws K, L, M.) R: I can't make N. Can you draw it for me? S: No. (S shows R how to draw N. R tries to draw N on a separate piece of paper. She draws it three times on this piece of paper and then draws it on the black construction paper. She then erases it. R draws P, O, and Q.)

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* Observer is L. Shohat.

(11:00) R starts cutting out the letters. S: Those letters look much better than before. If you continue to draw letters I will cut the letters. Otherwise we will never finish. (R starts drawing the lines and two boxes. R and S chat about books that R likes to read and about the school demonstration the day before.) S: Do two S's, two R's and two T's. R:(very disappointed): Oh, no! S: You need two T's for "The Present" (title). R: I have to make a list of the extra letters that I need. S: No, finish the alphabet and then make a list. (R is disappointed.) S: Okay, make the list now. (R writes on a separate sheet:

The Present	3 E's
By Rose G	1 B, 1G
Cast	
A . . . S	
N . . . S	1A
P . . . B	

S: Let us make an account of it. (S writes down with the help of R:

3 extra E's
1 extra B
1 extra G
1 extra T
1 extra A
1 extra R

S: Finish the letters at home. R: Where are you going to put my letters? S: Are you going to finish all the letters this week? R: I will try. S: Let us see the letters that you don't have to make. (S writes down all the letters that R has to make and crosses out the unnecessary ones: R S T U ~~V~~ ~~W~~ X Y ~~Z~~. S counts them.) S: You have to make fourteen letters. R: Shall I continue to make letters (now)? S: If you want to. (R draws the letter R. The bell rings. S puts all the letters in an envelope. R takes the letters and the black construction paper home to finish the remaining letters.)

Observer comments. R is complaining all the time about drawing the letters. She does not like what she draws. She has difficulty especially with the letters K and N. She gets very anxious, frustrated and bored. She tries very hard to convince S to draw the letters for her, but without success. When the bell rang she was very happy to leave.

June 17. (Tuesday)*

R worked on drawing the letters at home, but did not finish. She is afraid that S will get mad at her and does not want to go upstairs. The observer talks with her and convinces her to go to the classroom.

(10:00) R continues to draw letters. R and S are sitting opposite each other at different tables. R: How big are the letters that I have drawn? S: Two inches high and two and a half inches wide. (R measures two inches with the ruler and draws a straight line. Then she measures two and a half inches in width to make the first box for drawing letters in.) R: How many extra letters do I have to draw? S: We wrote everything last time. Don't you have it? R: No, I lost it. S: Well, you have to write everything again. You remember how we did it? R: Yeah. (R starts writing:

The Present
By Rose G . . . . .

Cast
A . . . S . . . . .
M . . . S . . . . .
N . . . S . . . . .
P . . . B . . . . .

R: I need three extra E's, right? S: Go through the titles and see how many extra letters you need for each title. (R goes through each title and writes down:

2 extra L's
1 extra T
1 extra S
1 extra L
1 extra A
1 extra B
1 extra G
1 extra I

(R has difficulty concentrating. She looks at what L, Larry, is doing. He is shooting an animation film. R counts the letters: Nine.) S: Good. R: I don't remember what the last letter that I made was. (R takes all the letters out of the envelope and checks the last letter she drew.) R: I made it up to U. (R writes down all the letters that she needs to draw: ~~U~~ ~~V~~ ~~W~~ X Y ~~Z~~. R starts drawing the letter X. She has difficulty with it and erases it a few times.)

(10:25) R: Oh, how do you make an X? (R draws an X and starts cutting it.) This isn't a very good X, but it is good enough. (R gets up and goes to A.) R: Can I see it, A (the drawing through the camera)? A: I haven't finished yet (focusing). R: I want to see it when you finish. (R comes back to work on the letters. She can't find the ruler. She stops again near A and looks through the camera.) R: It looks very good. (R finds the ruler and comes back to work on the letters. She measures two and a half inches with the ruler to make another box to draw Y in. She tries to draw it a few times.) R: S, I can't make a Y. (R gets up and goes to S.

S shows her how to draw a Y. R tries again.) R: I can't make a Y. (R gets very anxious. S shows her again. R tries to draw Y on a separate piece of paper. R finally draws Y and she cuts it.) R: Is that good (the Y)? Well, it is good enough. Now I will do the extras. (R looks at the list of extra letters.) Good, all the extra letters are easy to make. They have straight angles and lines. (R draws the letter E. She cuts it.) R: Oh, look what I did. I just cut part of the letter E. But I can still save it. (R thins the letter out a little.) It looks good enough.

(10:40) R draws another box with the ruler and draws another E in it. She cuts it out.) R(reads from the list): One extra T. (R draws a box with the ruler and then cuts it out. She draws T in it and cuts it out. R draws another box and in it the letter S. She then cuts it out.) R: It looks bad (the S). S, do you think I can use this S? S: Yeah, it looks good. R (reads from the list): One extra L. I like to make L. It is easy. (R draws another box and in it the letter L. She cuts it. She draws another box and in it the letter A. She tries to cut it, but has difficulty cutting the open end of the A. She cuts it too much and ruins it. She draws another A.) S: R, can you come to the workshop this week? R: No, my grandmother is here. S, I have only four more letters to draw. S: Good, but if you want to finish your film, you have to come to the workshop. (R gets up and asks S to cut the open end of the letter A for her. R looks at the list of letters.) R: I have to make the letter B. I like the letter B. (R draws another box and in it the letter B. She cuts it out, but asks S to cut the middle part of it for her. R draws another box and in it the letter G. She cuts it out.) R: S, look, the G is very thin (she has drawn a very skinny G). S: It is alright. (R draws another box and in it the letter I. She cuts it out.) (11:25) The bell rings. R leaves.

Observer comments. R had difficulty drawing the letters N, K, X and Y. She was on her own. She did not get any attention from S.

Analysis of Rose's Film

Rose did not go to the laboratory on any subsequent occasion so her titles did not become part of her film, nor was sound added. The school year finished. Nevertheless, hers was the longest film made by this group of children, being two minutes and 34 seconds in length. It was a quite comprehensible film unlike many of the others. It proceeds as follows:

Shot 1.	(17 seconds)	Long shot of A, the heroine, walking down a busy street towards us, to medium close up showing head and shoulders. The camera held by hand is unsteady and goes out of frame at one point while doing a slight pan towards the right.
Shot 2.	(4½ seconds)	A medium high shot of a doll in the store window. A cutaway from the heroine. Out of focus slightly with the camera again unsteady. Intent of shot not totally clear.

Shot 3.	(4 seconds)	Of heroine from side and behind, standing at store window looking at doll. Most of her body visible. Unsteady camera.
Shot 4.	(4 seconds)	Girl turns and walks to door of shop. She goes from a medium distance to medium close up as she walks toward the camera and turns at the door. Camera unsteady. Medium high shot.
Shot 5.	(4 seconds)	Shot of door. She enters in medium close up shot. Tilt downwards to right from shot, but no longer unsteady because camera is now on a tripod indoors. (Filming is being done at P.S. 3.)
Shot 6.	(1.8 seconds)	Pan and tilt down to table at right where action is to take place and where mother is reading the newspaper.
Shot 7.	(2 seconds)	Short shot of her entering the room from behind.
Shot 8.	(2.3 seconds)	Goes over and kisses mother. Medium close up to medium shot.
Shot 9.	(3.3 seconds)	Kissing mother. Close up. Turns and walks off to other room at left. Medium high shot.
Shot 10.	(3 seconds)	Mother gets up from table and goes to shelf. Camera tilts up to follow. She reaches for cups. Medium high angle, small tilt up.
Shot 11.	(3 seconds)	Shot of mother's head. She takes cups and puts them on the table. Shot begins badly with only her head and much of the room above her. Begins with a medium angle, then tilts down to the table, pans across and then back to the shelf again following the mother.
Shot 12.	(5 seconds)	Jump cut to the mother at the shelf, from medium low to medium high shot. Framing is better. Mother comes back and sits down at the table.
Shot 13.	(6.5 seconds)	Establishing shot of the door. A comes in from the right with dolls. She is panned as she crosses the room. She walks around the front of the table and turns to her mother. Medium long shot to close up. Finishes with a medium distance.
Shot 14.	(5.3 seconds)	Jump cut to sttting looking at her mother. Mother drinks. They talk. Camera unsteady at the beginning. Medium high angle. (This is the point in the plot where she tells her mother about the doll in the store. The sound, however, was not added.)

Shot 15.	(5.5 seconds)	Shot of door. Enter the father. He walks to right across the room and sits down with the others. Pan across and tilt down. Begins with high shot and tilts down to medium high. Unsteady camera.
Shot 16.	(1 second)	A medium shot of parents reading at couch with girl at the table with the doll in her lap.
Shot 17.	(6 seconds)	Jump cut with same content. Lower angle but still medium distance. The girl rocks the doll while the parents read. Unsteady camera.
Shot 18.	(6.6 seconds)	Cut to the bed with the girl in bed with her doll. This is a master shot of a different scene. (A master shot includes the important content; an establishing shot need not.) The girl lies there. A high angle shot. Unsteady camera.
Shot 19.	(4.5 seconds)	Cut to coming out of bedroom yawning. Pan to right. (This is a transition shot indicating the next day.) Begins with a high to medium high angle, and from medium to close up as she walks across the room. But returns to medium distance as she sits at table. Her father is reading the newspaper. (The new day begins with father and newspaper at table as the old one ended with same at the couch.)
Shot 20.	(4.5 seconds)	Sitting at the table next to father. Cut to another angle of the same (not jump because no time or movement interim). Medium close up, medium high angle. She looks over at her father's paper, then puts head on hand with a lonely and bored look.
Shot 21.	(5.5 seconds)	Cut to telephone. Medium high angle. Pans left to father, making a frame error as his head is left out. Medium close up of father and following pan as he stands up and goes to the phone. The telephone goes out of focus.
Shot 22.	(11 seconds)	A repeat of Shot 21, not edited out. Head not out of frame. Zooms out when he picks up the phone, showing more of the room. Hangs up phone.
Shot 23.	(4 seconds)	Jump cut as he turns from phone and returns to table. Camera pans down left and tilts down.
Shot 24.	(6 seconds)	Father and heroine reading at table. Medium distance and medium high. He tells her about the telephone conversation. (It was a call to say that her mother who had been called to see her own sick mother, was sending her a present.) He goes back to reading.

Shot 25.	(1.8 seconds)	Heroine gets up from table and runs towards the camera. Medium high angle, medium distance, to medium close up.
Shot 26.	(2 seconds)	Repeats Shot 25. But camera tilts up and gets ahead of the heroine. It is insteady and there is a framing problem because of her speed.
Shot 27.	(13 seconds)	Jump cut in which camera holds heroine as she goes to the door. It is a pan, a medium distance and a medium high shot. She opens the door. Medium close up. Mailman with bag delves in it for a package. He gives it to her. She closes the door. Tilts down to package. She turns from the door. Pan follows her to medium close up as she goes across the room and places the package on the table. Sits down at medium distance.
Shot 28.	(13.6 seconds)	Match cut at a different angle. Opens package and looks at it. Lifts out the doll. Smiles and hugs the doll. Rocks it and grins. Rocks some more. Looks at it again. Takes it to her breast and rocks it. Unsteady camera. Framing of father in picture is poor, only part of him showing. Small tilt up due to unsteadiness. Pan to left also unsteady.

Totals. The bulk of Rose's shots were at medium high angles (25 of 28) which is indeed the most common angle for early film makers, particularly for girls (as we shall show in a later chapter). If anything, Rose uses more of these medium angles than do other first film makers and she also uses somewhat fewer extreme angles than do other first film makers (although extremes in general are rare with early film makers). Her medium distances (24/28) were also a larger percentage than in other early film makers, but her medium close ups (12/28) were typical. This makes her technical procedures more stereotyped than most other film makers. Her shot lengths (average size 5.5 seconds) were shorter than general, the average overall being 7.5 seconds. She did, however, have considerably fewer errors than most first film makers, reflecting her greater than usual degree of supervision. Other techniques she used were: 8 horizontal shots, 1 high angle, 1 medium low, 1 long shot, 1 close up, 2 master shots, 2 transitions, 7 matched cuts, and 2 locations.

Rose had 17.5% errors. She has, in sum, used a fairly conservative approach, but it has paid off in a clearer film.

Interview

On June 25th, Rose (R) was interviewed by Lily Shohat (L) about her film. The interview follows. It is clear that she still expects to finish her film, adding sound, etc. This did not, however, occur.

L: What is your film about?
R: It is about a girl who wanted a doll and she gets it at the end.
L: Where did you get the idea for the film?
R: Out of my head.
L: Have you ever read about it anywhere?
R: No.
L: Did you have any other idea for a film?
R: No, I just thought about it right away and wrote it down.
L: What do you dislike in the film?
R: It is too corny.
L: What do you mean?
R: It is too babyish and too family involved.
L: So why did you choose it?
R: Because I did not think about anything else, and it was only my first movie.
L: What do you like about the film?
R: The shooting. I think I did that good.
L: What do you think is the most important part of your film?
R: I don't know. I don't have any most important part.
L: Do you think everything is equally important?
R: Yeah!
L: Did you like the change that you had to make as a result of Mellisa's leaving?
R: Ah!
L: What did you like in it?
R: Because it was not too complicated. It was just simple. I just liked it.
L: Suppose A had to leave. How would you have changed the film? What would you have done then?
R: I don't know. I didn't think about it.
L: Just think about it for a second.
R: I would have gotten a kid her size, and maybe a kid with black hair, and not take any close up of her face, or something like that.
L: Oh, that is a good idea. But do you think you will have to start everything from the beginning?
R: No.
L: If you have to do the whole film all over again . . . !
R: I will faint.
L: Would you make the film the same way?
R: Yeah.
L: Were you satisfied the way it was done?
R: Yeah.
L: Won't you change anything?
R: If I had to do it for what?

L: To make the movie again.

R: Why?

L: Just for the experience.

R: I might change it a little bit.

L: Like where?

R: I don't know. I have never thought about it, but I might.

L: Think about it for a while. Which part would you have changed?

R: Ah . . . I don't know.

L: Why did you choose live action and not animation?

R: Because I like live action and more kids like that, and more interesting thing, people they know and people that they have seen, or kids their own age doing it.

L: Do you think you could make an animation film now?

R: I could, but I don't want to.

L: What did you like most in making the film? Shooting, the story . . . ?

R: Shooting.

L: What about . . . ?

R: No, no, I like editing best.

L: Did you like editing? But you didn't like it in the beginning, did you?

R: I liked it.

L: Didn't you have any problem with it?

R: I had problems with it, but that does not mean I didn't like it.

L: What did you like the most about it?

R: I liked cutting it and having it done, and looking through it. I like having it done and being excited and then seeing what can happen.

L: Did you like splicing, too?

R: That is my favorite.

L: What did you like next to editing? Did you like writing the script or making the shot list?

R: Shooting.

L: What did you like the least?

R: Making the titles.

L: Did you like making the shot list?

R: Yeah.

L: Why did you choose to be the camera person and the director and not the actress?

R: Because if I was the actress, it wouldn't be making the film and I wanted to be able to make it.

L: What do you think the director is supposed to do?

R: He is supposed to set up the scene, where the room is going to be set up, pick out the actors and stuff like that.

L: Were you happy with the actors that you chose?

R: I wasn't happy with Alexa, but I was happy with the others.

L: Why weren't you happy with Alexa?

R: Because Alexa wasn't concentrating. She thought it is a funny game and she did not know that it will make more editing. It makes a horror if she cracked up in the middle.

L: Do you think if you had to make the film again you would change her?

R: No.

L: Did your film appear the way you expected it?

R: Susan has asked me already. Hm, hm, yeah.

L: Did you expect it to be the same way exactly?

R: Few things I have been a little disappointed with.

L: Like what?

R: Like when Alexa is walking down the street she has no coat on, but when she comes in she has a coat on.

L: When you wrote the shot list did you think that that is the way it is going to look?

R: Yeah.

L: Exactly?

R: Yeah.

L: Do you think people will understand your film?

R: When I finish it?

L: Yes.

R: Probably.

L: Do you think they won't have any difficulties?

R: Yeah.

L: How long did you think the film would be? How long is it now?

R: It is about four or five minutes.

L: How long did you think it was going to be when you just started shooting it?

R: Longer.

L: How much longer?

R: Ten to fifteen minutes.

L: If you had to do the movie again, would you shoot it differently? Would you have different scenes for different places?

R: No.

L: Do you think that was the way it should have been done?

R: Yeah, it is pretty good.

L: Can you describe what it is like to be a film maker?

R: I like it. It is fun. You have the authority over everybody. It is like you are the boss.

L: Do you think you could have made the movie without Susan?

R: No.

L: Do you think you can make your next movie without so much help?

R: Ah, ah!

L: What kind of help do you need?

R: I need help with setting up the lamp. I am not so sure about that. And making the headings.

L: What else?

R: That's it.

L: Don't you think you need some help in . . .

R: Well, in shooting I need a little bit of direction. I need a little bit of everything.

L: Do you think in your next film you will be more independent?

R: Yeah.

L: What do you feel you have learned in the process of making the film?

R: How to make films.

L: Can you be more specific?

R: No, I just don't know. I didn't learn anything in particular, except how to make them.

L: Did you see anyone making a film before?

R: Someone showed us, but he didn't teach it. He will do all the shooting and we just make up the film and everything.

L: What kind of film will be your next one? Animation, live action?

R: A little live action better.

L: Do you know what kind of story you would choose? Do you have any idea?

R: Not yet.

L: Do you know what is a scene?

R: It is when you take . . . like there is one scene in my movie when Alexa is coming down the block, right? So that one scene is coming down the block and comes to a stop, and then I cut.

L: Is that the end of the scene?

R: Right. And then I will start her walking and looking in the window.

L: How many different scenes do you have in your movie?

R: About ten, eleven, thirteen.

L: How would you explain to somebody when is the beginning and when is the end of a scene?

R: I will show the person.

L: How?

R: Well, I will point out where it starts and where it ends.

L: If you want to divide the film, how can you divide other than by scene? Can you divide other than by scene?

R: No.

L: You can think of division only in terms of scenes?

R: Well, you can divide it into one set of people and one set of just the house. Nothing really important.

L: Do you think that other people will see as many parts as you see, as many scenes as you see?

R: More.

L: Why?

R: Because I have probably seen it like ten times already or more and I am so used to it, I bet they will find it more interesting and see more in it.

L: More scenes?

R: Yeah.

L: Since you have made the film have you thought about it?

R: Yeah. Just about last Friday we had a party in my friend's house and they had a Super 8 movie projector I was thinking about. I have told them that I will bring it over when I will finish it. But then I was thinking, what if they don't like it and they will start making fun of it!

L: Don't you think it is a good movie?

R: Yeah.

L: Why were you so interested in making a film?

R: It is nice. The idea is fun.

L: Do you want to use it in the future?

R: If I want to be a movie maker in the future that will be nice, but it is only fun for now because I don't think that is what I want to be when I grow up.

CHAPTER III

WHAT HAPPENED TO EVERYONE ELSE AT P.S. 3?

In the prior chapter we described the progress of Rose from beginner to first film maker. She was chosen because her film was judged the most coherent by all who have seen the films of this P.S. 3 group. Our analysis of her film shots at the end of the chapter tends to confirm that impression. There are, by and large, fewer errors for a beginner than those to be found in the films of other beginners.

In this chapter we must attempt to understand why she succeeded and others did less well, or failed. Of the group of twelve children that began in this study, only seven managed to complete some kind of film in the three months available to them. The other five dropped out rather early in the study. The most obvious explanation and the one we most favor, and the one so clearly documented by the case study, is that Rose and Susan developed a special relationship within this group. Rose entered into a close apprenticeship with Susan and in that way learned more than anyone else. In the documentation provided, Rose comes through clearly as a girl who by her persistence, clear anxiety and self-deprecation, manipulates her teachers (Carlos also) into giving her a maximum amount of reward and attention. Although both teachers recurrently resisted her attempts to inveigle them into doing almost everything for her, she was a remarkable success in getting them to provide her with almost constant guidance throughout. Needless to say, their efforts were not completely without success. She did show some mastery in most aspects of the work before she was finished (rehearsing, camera, editing, splicing, etc.), and had considerable delight in her own film when she first saw it projected. Her angry and often dominant reactions to other children perhaps tell us something "projectively" about why she relies on adults, and what she expects from them if she does not behave in the fairly passive but manipulative way that she revealed. Susan paid little attention to anyone else after about the fifth session so that all the other children were very much under the care of Carlos thereafter. In effect, the other children had a sixth each of Carlos for the long haul while Rose had the whole of Susan throughout.

Before proceeding with this kind of post hoc detective work, however, it is necessary to set forth in more summary form what the other six did achieve. Only two others produced films (Robin K and Jessica R), the rest produced animations (Jason B, Larry O, Marion R and Pan W). We will here concentrate only on their achievements and leave until later the analysis of how they came to their relative successes (as compared with those who dropped out).

The Other Films

1. Robin K (8 years).

Robin's script was as follows (spelling and punctuation as in original):

> Once upon a time there was two fancy funny fraction cats in two
> fancy furry fashanble (sic) finance cat houses. they like to play
> with fat fabulious pompoms. but their one problem sometimes is
> that can not find food. so sometimes thay go to house to house.
> to get food. so the fraction on their bodies won't come off.
> so they try not to loose weight. so they ask people where to
> get food.

Robin's father is a film director and in a preinterview she reports having had a dream about being in one of them. The father is divorcing the mother, however, and now she would rather be a dancer. Her shot list was not much different from her script and was not arranged properly in two columns as in Rose's case. Thus:

> Cats ¼ and ½: walk out and say to one another hi how are you today.
> and then walk in to your funny cat houses and say to one other.
> it nice to be a fancy funny fraction cats we are so rich and
> elegant and start walk around elegant like if you were in a ballet.
> and go back to your cat houses. and get your pompoms playing and
> talking about anything that makes you feel good. and then stop and
> look in your a e and say we are broke we are poor now and go in the
> other room and go to the house to house and bege for food stop at the
> last house say oh dear are fractions coming off. we are goners.

Robin did her own camera work. The two cats were given cardboard masks and ears strapped onto their heads. Robin directed the action from behind the camera. By and large she was able to get most of the action in the camera, that is, she followed it reasonably well. But apart from the masks and ears there was a minimum of audience concern by the two characters. This was clearly a funny game for them (we were uncertain of their knowledge of the double entendre of "cat houses" but suspect at least that they had a strong intuition that they were in "fun" territory). The shot list is a slight improvement on the script in indicating action. And there was some clear demaraation of the actions themselves in the film. They came on giggling in dress and then proceeded to go under the table (which was into a house). They came out with pompoms which they proceeded to juggle in the air while on all fours, then back into the houses, etc.

In her post interview she said she thought making the film would be fun--her father had told her it would-- but that she would not make another because it was boring. When asked if she thought her film was complete, she said: "It was yicky, not complete, boring and disgusting." When asked what was the most important part of her film, she said: "There are not any important parts of the film."

I: What does that mean? Does that mean that all the parts are equally important?
R: They are not good. It wasn't fun like I thought it was going to be. . .
I: Why did you choose live action?
R: Because I didn't like drawing.
I: Did your film appear the way you expected it to?
R: No. . .
I: What kinds of things do you think you learned here?
R: Nothing.
I: Nothing?
R: I knew how to splice. My father has a splicer and he's got a bigger reel than that.
I: What about writing and directing the film? Have you ever done that before?
R: Yes, on video. . .
I: So you feel like you didn't learn anything.
R: Are we over? . . . I would never do this again.

These are a few brief incidents from an incredibly recalcitrant twelve page interview in which Frank Eadie attempted to cover all aspects of her film making experience, but Robin wanted nothing to do with either the interview or the film making subject matter.

2. Jessica R (7 years).

Jessica's script was titled, "The Pretty Pond," and proceeded as follows:

> Narator (sic): One beautiful day in spring Carrie Mrs. Winston's daughter, after school went to a pretty poond to fech some water singing "oh, what a beautifiul morning", When Carrie got home she gave her mother the water. Mother, thank you.
> Narator: And Carrie went to her room, she flopped on her bed and started to cuddle with her puppy pup, pup barked. Carrie: Hi!
> Narator: then . . . Mother ! Carrie. Carrie !!!
> Narator: Carrie ran in. (Jessica runs in) Carrie ! yes mother.
> Mother: this water is not good, its yellow . . .
> Carrie: so.
> Mother: so I want you to get good water !
> Narator: And she did.
> Carrie: Oh ! (yelling when she got down the stairs and out the door) Carrie: oops I forgot the pail.
> At dinner. Mother: how is it ? Carrie: oh, fine thank you.
> Carrie: Mother. Mother: yes ? Carrie: its such a pretty pond.
> Mother: so it is. Mother; Off to bed. In the morning.
> Mother: Carrie. Carrie!! (vell) (run) Carrie: yes ?
> Mother: look . . . Carrie: OOooooo---- Carrie: My dog ? puppie's (hugging her mother) Mother: yes, yes .
>
> The End
>
> Cast
> Mother: Robin
> Carrie: Jessica
> Narator: Jessica
> Puppy: Sarah

Much of the time in the film, as shown, the narrator was directly in front of the camera reading from the above script held up high in front of her face. The narrator then became the main actor, and as the film work of framing the action and holding the camera steady was done very poorly by a stand-in, the whole piece (without sound) was fairly unintelligible --particularly as it took in much of the rest of the studio without attempts to frame out non-involved persons. Extracts from the post interview are as follows:

I: Did you like your film?
J: No.

I: No? Why not?

J: It was hard to work on . . . the splicing and viewing . . . sometimes you move it and it won't go over.

I: . . . Do you think the film is complete as it is?

J: No . . . because the ending isn't. It's not a real ending. . . It's just an ending like an opening . . . It just ended in a way I didn't like when I saw it.

I: If you had to do the whole thing over again would you make it in the same way?

J: No. . . I would finish maybe the whole thing, except the titling, the characters and some parts. I didn't shoot the film. Jason shot it and he just messed up. . . I would shoot the scenes in different places and when one person talks I would spot the camera.

I: What did you like most when you made the film, making a story, editing it, shooting it (well, you didn't shoot it), working with the characters?

J: Will you be done soon?

I: Did you make a storyboard or shot list?

J: No, but I made them for my second film, which was animation.

I: Why did you choose animation?

J: It's easier. You can shoot it just the way you want.

I: What do you think you learned?

J: How to splice.

I: Why didn't you like splicing?

J: When I put the holes (splice markers) I may put them in a hundred places and I never know where I should cut it.

I: Which parts didn't appear the way you expected it to?

J: The parts that Robin had done. She didn't know her parts.

I: Why did you choose live action for your first movie?

J: Because I thought it would be fun. (She says this as if she is about to cry. She is visibly distressed in the situation.)

3. Jason B (7 years).

Jason's animation was the first movie to be completed in the group. It was completed in an early session after which he spent a great deal of time learning about the technical aspects of film making. It was called, "The Bomb Show." He prepared no script, though he did jot down some titles on a scrap of paper and he did make a storyboard. Using cutouts from magazines he shows bombs dropping on a man and then on a city. The figure in the cartoon has a balloon from his mouth in which he says, "Napalm jelly on bread burns me up." When the bombs land the structures of the building, etc., whirl about as if they have been hit. The use of this rather easy animation technique makes the whole of fair comprehensibility. Next scene is a reporter in front of the White House who says, via balloon, "Now we take you to the nuclear bomb." After a town is destroyed we see the subtitles, "Town Destroyed" and

Boom." The idea of the film originated in the joking word play involving the difference between jelly on bread and napalm jelly. The cartoon has a humorous (if sick) intent throughout with the jelly confusion and the normal newscaster announcing a nuclear holocaust. In the stories we had been collecting from Jason earlier he showed a similar preference for word play. Thus he wrote of a character who took a train to Flatbush and thought it was a flat bush. And there is another story in which a ground hog went out and saw his shadow and began to shadow box.

Excerpts from his post interview are as follows:

I: Why is it called "The Bomb Show"?
J: Because it's a show of bombs.
I: Did you have any other titles at the time of the original title?
J: No.
I: Where did you get the idea?
J: I made a bomb of a bomb.
I: Why did you choose that?
J: It was different than anything else.
I: Like what else?
J: Other types of movies.
I: What do you dislike about the film?
J: There's nothing to dislike.
I: What is the most important part of your film?
J: Dropping the bombs, I guess.
I: You drop bombs twice, yes?
J: Yeah.
I: Both times, one time, which time is more important?
J: The second one, I guess.
I: Why?
J: That's the nuclear bomb.
I: What is the first bomb?
J: A napalm bomb.
I: Why is the nuclear bomb more important than the napalm bomb?
J: Because it wipes out more.
I: More people?
J: (Nods yes.)
I: If you had to do over again would you make the film the same way?
J: Yes.
I: Would you change anything?
J: No, nothing.
I: Why did you choose animation?
J: Because it's the easiest . . .
I: Why did you decide on drawings . . . Well, you had drawings and cutouts.
J: Yes.
I: You had mostly drawings. What else did you do beside drawings?
J: Cutouts. I didn't want to write because it takes too long.
I: Why did you decide on drawings and cutouts?
J: It's easier.

I: Could you have used live action?

J: Yes. . . It would have been harder.

I: Why?

J: Well, if you were going to throw a bomb off an airplane . . . you wouldn't think of a live picture.

I: What do you like about animation?

J: That it's easy.

I: What's easy about it? What makes it easy?

J: Because you cut out pictures, that's all.

I: What do you like most of making the film, like drawings, shotlist, shooting, editing?

J: Editing.

I: Why?

J: I get to see it and edit it at the same time.

I: Describe what it is like to be a film maker.

J: That's hard to explain. It's very involved. I can't describe it. It's too hard.

I: Well, what do you mean? What are the things that are about it?

J: It's fun, I guess. That's about it.

I: What do you like about it?

J: Making movies. It's fun.

I: What do you dislike?

J: There's nothing to dislike about it.

I: Do you think you could have made it without Carlos?

J: Yeah, I think so.

I: What kind of help do you need?

J: I didn't need much.

I: Not much, but were there any specific points you did need help?

J: I don't know.

I: Okay. Are you going to make any more films?

J: One more right now.

I: What's this going to be about?

J: The President (Ford).

I: That's also an animation?

J: Yes.

I: Why are you making the new animation?

J: I want to make another one.

I: What would you want to do more of? If there's any part of film making that you like and you had a choice you could do more of something, or less of something, what would you like to do more of?

J: Make more movies.

I: Any special kind?

J: Just animation.

I: Why?

J: Because they're fun.

I: They're fun to . . .

J: To make.

I: Why wouldn't you like to make live movies?

J: They're too hard.

I: Why?

J: Oh, I don't know.

I: What part (is hard) about them?

J: You have to get all the people to come up.

I: What else do you have to do that is hard?
J: If you want to make a live movie you have to go out and shoot it on the street.
I: Is that hard?
J: No, but still on the whole animation is better. I make some films with my brother at home.
I: What kind of films were they?
J: Trick photography.
I: What do you mean?
J: He starred in all but one.
I: What makes it trick photography? What do you consider trick photography?
J: We shoot it. We shoot somebody, move the body and then shoot it again.
I: And make it look like the person disappeared?
J: Yeah.
I: Have you made a lot of those movies?
J: Yeah.
I: How old is your brother?
J: Thirteen.
I: Is that how old he was when you made the movies?
J: No, it was around twelve or eleven.
I: What do you feel you learned here?
J: How to make movies.

From these interview excerpts we see that Jason had an earlier success in making his film and came out of the experience with a positive attitude towards it, unlike both Robin and Jessica. The observations on him in the workshop show that he applied himself from the very beginning, that he had fun with the editor on the first day (April 7th), that he continued working with the viewer the second day (April 8th), and was full of good humored verbal play. The second week he began on his list of ideas. He explains his story to both Carlos and Anthony and discusses it with them. On April 21st he works closely with Carlos.

The following are excerpts from observations made on April 21st and 22nd.

April 21 (Monday)*

(9:45) Jason (J) walks in and joins a group consisting of Carlos (C), Bruce (B) and Larry (L). He quietly watches C explain how to focus. J takes out the storyboard. C asks to look at it. C looks at the board. C: You know this movie is going to make a good animation. We will have to get some magazines for you. (C asks about the third row second box story.) C: What is this? J: A reporter. (C helps J construct a sentence of the event that he is reporting. They write:

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* Observer is Anthony Russo.

"This is what is left of the town.") C: What is next? J: This is the end. C: Aren't we going to finish it? J: It is finished. C: You are going to end the story before it is over? J: I am finished. (C gets up and gets a magazine, the New York Times Magazine.) C: This is the only magazine we have. You may have to draw some pictures. J: Oh, no. C: Yeah, more work. (J looks through the magazine. He finds a picture of a plane. C gets the scissors and J begins to cut out the airplane.) J: Delta is ready when you are and drops the bomb (the ad is for Delta Airlines). Imagine if my parents came up here. We come here to talk. C: We come here to make films. J: All we do is talk. (J finds another picture of a person lying dead after a robbery in a store.)

(10:20) J continues to look through the magazine. C: Look, bridges. (J cuts out the bridges. He then finds a picture of a building and cuts that out. At the same table, B asks L if he ever saw "The Towering Inferno.") L: Yes. (B asks how much did you pay for it.) J (entering the conversation): Shake and Bake, that's all that is, Shake and Bake. (J, who is still looking through the magazine, finds a picture of a house and he cuts it out.) (10:30) J (to the observer, O): Is that all you do is write? Why don't you write for us? O: That is my job. J: Your job is to write for us. (J looks through the magazine for a while longer.) J (closing the pages, to C): I'm finished. C: Wait, let's finish. (C looks through the magazine and finds a picture of a woman. J cuts it out.) J: I'm finished. C: Wait, you have to finish. J: How are we going to do the animation? C: Don't worry about that now. Just find the pictures. J: You know you are a real pain. (J looks through the magazine again. He finds a picture of a piece of cake and cuts it out. He stretches.) C: Do you want to make a film? J: Yes. C: Well, then, let's get to it. (J continues to look through the magazine. He finds a picture of a football player and cuts it out. Unlike the other cutouts he cuts the outline of the person.)

(10:35) B and L are talking about the Beatles. J (entering in): I have met the Beatles' "It's Okay." (They all sing, "I wanna hold your hand." C comes over and looks through the magazine. J looks at the observer and what he is writing.) J: You've written a lot. C: Look, here is a picture. J: Okay. C: Oh, come on. (J cuts out the picture. J gets up and looks at cameras. C comes over.) J: Tell me one thing. How do these work? C: They are locked. You move the lock and they work. (J looks through the camera at Collin. He moves the zoom and says, "Small fry." Collin comes over. J looks at Collin through the camera.) Frank: J, you are going to run down the batteries if you do that. J: That is too bad. You'll just have to buy new ones. (J then goes to talk. C sits down. C takes out the pictures J has already cut out and gives them to him to trim and cut around the pictures.) J: When are we going to start shooting? C: We will shoot when we are finished with this. (C takes out a blue piece of paper to put the pictures on. C directs J in the cutting.) C: Let's cut some of this off (pointing to excess paper on the figure of the person). (C gets the storyboard and organizes the pictures according to the storyboard.) C: Look, here is your reporter. Take the reporter and put it here. J: What are we doing? C: Animation. J: I don't want to do animation. C: I asked you at the beginning if you wanted to do animation and you said, "yes." J: I don't want to do animation. I want to do a real movie. C: We'll do animation now and a movie later. (J looks disillusioned and stares at the table.)

(10:55) C (to J after a three minute break during which J looks around and stares at the table): Let's get going. J: What are we going to do? (C gets an animation stand and tells J to get his cutouts. C puts the camera on the stand.

C asks J to bring the paper over. J looks through the camera down at the paper. He takes the picture of his airplane, puts it on the board and looks through the camera. He plays with the zoom. C asks J if he knows how to focus. C shows him how to focus. He shows J where to turn the focus knob.) C: You turn this until it is nice and clear, nice and sharp. (11:05) C goes to get another lens. He comes back. J: What is this? C: A macro lens. This must be eight inches from the board. We have to get a ruler. (C gets a ruler and they measure eight inches from the board.) C: Now, let's look through the telephoto. (J looks through the camera.) C: It looks really big, doesn't it? J: Oh, neat. (to O:) You should take a look through. (The observer looks through the camera.) J: That's neat. C: Now let's get your story board. (C gets the story board and the picture of the football player.) C: Now, what's our first shot? (C also gets a one shot presser and shows it to J. He asks J how to press it. C then gets a piece of paper.) C: See, time lapse (the drum picture is of frames of film and next to it 24 frames per second). See, frames. That is what we are going to make. (11:20) C goes over to help the other children. J goes to some paper and tries to draw a bomb. J: I can't draw this. I'm going to do it later. I'm going home. (J walks around the room. He goes to the animation board and plays with the lens and camera. The bell rings.) J: I gotta go. (J walks over to C and tells him that he has to go.) C: Okay, did you put away your stuff? Okay, I'll put it away.

April 22 (Tuesday).*

(9:55) J comes in and tells C that he made a bomb. J: I made it. (C takes out a camera and an animation stand. J picks up the camera and looks at it. C and J measure the distance between where the camera will go and the board, sixteen inches. C gets a big piece of yellow paper and asks J to tape it to the board. J tapes the corners.) C: What are we going to do next? J: The film. C: Yes. (C asks J to open up the film. J opens up the film and C instructs him on how to put it into the camera. After inserting the film C asks J to stare through the camera and look down at his finger. As C moves his finger he marks the outer bounds with dots so that they will know where to place the pictures. C places the picture of the house on the board and he asks J to zoom in. J does and then C asks J to focus. C explains that the way one focuses is to look at the straight line in the picture and if it is not straight it should be. At first J does not understand. He claims the line is straight when it is not. C tells J it is not straight and to look again.) C: See, this line (pointing to the line)? It is not straight. J: Oh, yeah. (J focuses it. C then instructs J to cut out the words printed on his story board. He cuts them out and places them on the animation board with a picture of a house and a man. It reads, "We are all here at the bomb show." C then asks J to look through the camera and read the cut out while filming. J does, but quickly. C asks J how long he thought he had filmed that shot.) J: Five seconds. C (to O): Do you think that was enough time for people in the audience to read it? J: No. (C asks J to film it again, but to read it slower.) J: Yeah, we could always edit it. (C and J go on to the next set of pictures. C tells J they must shoot shot by shot now. C tells J to shoot eight frames, 8 X 8, of the first scene, then stop. He asks J what he wants the reporter to do. The reporter is at the White House. J had wanted the reporter to move out of the picture. As C moves the reporter a fraction of an inch he asks J to shoot four frames each time C moves the picture until the reporter is out of the picture. The next scene is of the reporter, a football player holding a bomb, which is really a piece of cake pasted on him, and a cutout of, "Here we are waiting for the next napalm bomb." C asks J what he should do next. When J has no answer C tells J to look through the camera and read the cut out as he films. The next scene is for J to shoot eight frames and then four frames continuously until C has moved the cutouts out of the picture.)

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* Observer is Anthony Russo.

(10:35) C asks J what is next. J looks at his storyboard, takes the cutout of the football player and the bomb and cuts out, "Napalm jelly on bread just burns me up." C lines the picture up and asks J what is next. J could not think and C would not give J the answer. J(after a twenty second pause): You take this off (pointing to the cue frame accessory) and read the cutout. C (after J has read and filmed the cutout): You know what would be funny, if you wiggled the football player. J agrees and they wiggle the player, 4 frames by 4 frames, until he moves out of the picture. J then gets ready for the next scene, which is of an airplane and a bomb and the football player. C tells J that it would be a good idea if the plane came into the picture. He takes a picture of the football player and the plane coming in, 4 frames by 4 frames.) J (while filming this): I can do the editing. I [illegible] to get Mark to see this. (C takes the bomb and puts it under the airplane. The bomb slowly drops down, 4 X 4, and drops down onto the football player.) C: We need a boom now, the word boom. J: I could stay during lunch so we could finish [illegible]. (J writes the word, boom, as C spells it for him. He cuts it out and places [illegible] the animation board.)

(10:50) C asks J what happens when the bomb falls, what is going to happen. Are things going to move? J: No. C: What kind of a bomb is that going to be? (The next scene is of the football player, a bridge, a hotel, a house and the word, "Boom." While J is shooting four frames by four frames everything on the board is moving or shaking because of the bomb.) J: We should get some red paper and put it all over. C: Really? J: No. J: I am going to give credit to P.S. 3 and the principal, John. (J laughs. I mentioned John because the other children were talking about him.) J: You know, we should shoot one frame, then move the scene. (C compromises on two frames, two by two, and they continue to move the pictures. All the pictures finally come together in the center of the board. C tells J to shoot four frames.)

(11:00) C and J get ready for the next scene. The next scene is of the football player lying on his back, as the reporter, saying, "Now we take you to the nuclear [illegible]." J then shoots the picture while reading the cutout. They then move the people out of the picture, two frames by two frames. J felt it was better shooting by two frames. They move out in opposite directions, unlike all the other scenes, [illegible]. The next scene is of the White House, a bridge, a hotel and an airplane [illegible]. They shoot four frames by four frames. J says he feels four by four is [illegible], but he gives no reason. The bomb is dropping again. J then decides to "make [illegible]," and shoots frames two by two with the bomb falling on the bridge. J then [illegible] the bridge in half. They shoot eight frames at C's recommendation. All of the pictures move around with J shooting four by four frames. They forget to put in the [illegible] "Boom," but C remembers. J puts in "Boom" and they continue to shake the pictures shooting four by four frames. J zooms in and continues to shake everything around. Now C is doing nothing and J is shooting and for the first time moving the pictures and using the zoom.)

(11:10) The next scene consists of the same pictures and the cutout, "T[illegible]." All of the pictures are in the middle of the board. J reads the cutout and shoots. The next scene consists of the same pictures, but J adds the reporter and the cutout, "This is what is left of the town." He reads the cutout and films it. The next scene is of the bridge, hotel, house and bomb. The film has ended. Now it is time to add the credits. (11:15) C gets some paper and pastels for J and J writes, "Movie by Jason B . . . . . 4/22/75. J writes the date at C's recommendation. C and J put the credits on the board. J: What do we do now? C: How did we do the written parts before? (J recalls. He reads the films and writes, "THE END." He films that and reads it while filming. (11:25) C and J put J's things away. C shoots the rest of the film with the lens cap on. J asks what happens to the film. C: We send it to the lab. (J leaves. The bell rings.)

One of the most interesting aspects of Jason's work is that he moves so quickly to its completion. Within six sessions he is finished. Again, as in Rose's case, we see the tight dependence upon Carlos for help and the need for the teacher to keep urging the student onto aspects of the process which are time consuming and hard work. Unlike Rose, however, Jason has a relative eagerness to get on with the various processes. He has an easily expressed and humorous aggressiveness both towards Carlos and towards the observers. In addition, it seems that Carlos is more questioning and instigating to independent judgment and that Jason accepts those more easily than Rose was able to. This seems to imply that in both cases there is very great technical reliance of student on teacher, but that in the Rose-Susan case there is additional mutual interdependence of help seeking and reward giving.

It needs to be added that the researchers continued to urge that the children be given as much independence as possible and Carlos, who received special pay for this project (when Susan did not), appeared susceptible to this influence. He did his best to encourage the children to proceed on their own, especially after the fifth session when Susan pretty much worked only with Rose.

4. Larry O.

Larry's animation was titled, "The Magician." He attends only a couple of times in April and shows only mild interest and involvement in what is going on, although his major effort in one session is on drawing a storyboard that he will never get to use. He does not show in May, but returns on June 9th, and the following conversation with Carlos takes place:

June 9.*

L comes in quietly and sits around, saying nothing, for five minutes. C: I can't solve all your problems. You have to go get the book, the magazines (to cut out pictures for the animation). L: I know. (L sits, then walks around the table, wandering aimlessly back and forth. Finally, C tries again.) C: So, L, why did you come up here? Do you know? (There is a long silence.) Do you know what we do here? L: Yes. C: Do you want to take part in it? L: Yes. (There is another long silence.) C: You've got to do something . . . (There is a long silence and C ambles away. L goes to look at the editing room briefly, then looks in on an interview going on in the other corner. He then walks over to the window and stands rubbing his eye. C gets up, wanders over, and looks out the window.) C: Do you draw? L: Yeah. C: That might be a way to start. So I'm going to get you a paper and pencil, okay? (C goes to the closet. He calls, "Come on!" to L, who goes over to a table as C brings him paper and pencils. C gives L a piece of paper folded in four.) L (pointing to squares as he unfolds the paper): One, two, three, four? C (nods and picks up the pencils): These need sharpening. L: Okay, I'll wait till you get back. C: Aren't you going to sharpen them? (C and L go together to sharpen the pencils. They return to the table. L draws a menacing figure with one arm pointing up and one down, looming out of a green swamp. The lunch bell rings.) O (to L, as he is leaving): I think that's the creature from the green lagoon. (L smiles and nods.)

On June 16th Larry is back again and in one session proceeds to complete his animation. It is an amusing story of a magician, beautifully colored in black with a red cape and hat who produces magical explosions with clouds of smoke and light.

June 16.*

L begins drawing, then crosses out his first effort. He then draws a figure with a cape and hat, arms raised. He finishes off the drawing with a fourish. O: Who is it? L: A magician. I've got a strange idea for him. (L looks over at C for approval and smiles to himself. His face registers intense concentration while drawing the next figure.) O: What's happening? L: He threw his hat out. Watch this! (L draws.) O: He looks like he's making lightning with his hands. L (pleased): He is! (L seems to really get into drawing the lightning.) L (to C): Can I use the outside of the paper, too? C: Sure. Are you going to color them in? L: Maybe. (L draws some fan shape lines. He stands back and surveys his drawing critically. He makes a scribbled ball of lines and grimaces. He seems to be seeing an image clearly in his mind which he is intent on rendering. He pauses to watch another child draw.) O: I'm really curious to know what that is (pointing to the last scribble). L: You are? (He looks at the O as if to check her out.) Smoke. Look. (L turns back to the first drawing.) First there's a magician, then he throws his hat away, then b-r-r-r-r-m (imitating lightning flashing with his hands), then smoke. (L waves his hands. He returns to drawing, lips pursed, smiling to himself.)

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* The observer on both days is Fabricant.

L: This is almost finished. (L writes, "THE END." He looks at C and points to his last drawing of a lot of girls surrounding the magician.) L: I want to use some sound for it. I want voices to say, "He's mine, he's mine, he's mine." (The voices get fainter. L's tone is authoritative, "directorial." He draws hearts around "THE END." L looks at C for approval. Then he acts out the whole drama, complete with noises.) C (pointing to L's first drawing of a creature in a lagoon): Why don't you finish this? L: It's done. C: Four pictures? L: My arm's getting tired. (There is general laughter. C and L discuss the fact that it's too short.) C: Why don't you color these? (L selects a color.) L (to himself): I'll put on some green. His shoes can be green. (L colors the shoes, then colors the cape brown and pants blue. He looks for another color.) L: Black. Is there black? (C points out the crayons.) Oh! (L silently claps his hands, then snaps his fingers and holds up his index finger, all in one quick sequence.) F (pointing to drawings): What are they? L: I'm coloring something. Want to see it? (L goes through the whole story, complete with sound effects, for F, Frank.) F: How are you going to make a film? L (grimaces): I haven't decided yet. It's a "dirty" movie. (L continues coloring. He colors the lightning brown, then stares at it. He peeks at O, who is staring at him. He colors the smoke red and the next smoke picture black. Then, in the last frame, he colors hearts around "THE END" red. He surveys his handiwork.) L: I've got to color in one more thing. (He colors hearts over the girls red and the table top blue. He colors one girl's eyes red and her shirt blue. He finishes coloring the whole picture and goes to C to discuss the sound.) L: I only want sound in two places. (L makes thunder noises.) Can we make the sound now? C: No, not now. L: So what can I do now? C: You can film it. The only bad news I have is we only have black and white film. (C and L discuss getting the film.) C: I think you should make up some more sounds. A magician talks to his audience. (They look for a tape recorder.) Why don't you sit down and write it up. (L makes a game of wandering all around the room.) C: Will he find the table? Come on, write it down. L (grimaces): First we need the tape recorder. (L pauses.) Will there be enough time for the magician to say something. C: It depends on how long he's on. (The tape recorder arrives. L makes silent laughing noises into it, performing in mime. He glances sidelong at O, then imitates a rock singer silently. L and C set up the recorder and test it.) C: I think you ought to write down what the magician says. L: Okay. (C gets L's drawing and brings it in.) How do you spell "perform". . . "super" . . .? (C spells the words for him.) C: Okay, I'll hold the mike for you. L: No, I'll hold it. (L grabs the mike from C.) C: Okay, but don't hold it too close. (L goes through his silent rock and roll thing again.) L (into the recorder): I will now perform a stupendous magical trick. (L looks like he's been under a big strain when he's finished.) O: Scary, isn't it? (L goes into Elvis Presley convulsions, falling on the floor, singing, "You ain't nothin' but a hounddog." He turns the button on the mike on and off with flourish and determination. He then goes through the whole recording sequence again. C tries to persuade him to write down the text before he records it.) L(plays back what he's recorded and comments): It's more a (makes a lightning noise) than (makes another noise), but that's as close as I'll get. (L writes.) O: You wrote it all out? Everything? L: Everything I need. (L gets up and wanders around, watching the other children for a while. He tries to get C's attention and is annoyed when he fails. He sits on the floor looking bored.) O: Why don't you read what you've written into the recorder? (L makes crashing noises. He plays with the recorder, learning how to use it as he performs his line, "I will now . . . " He records crashing noises. The bell rings.) L: This is terrible. Tomorrow I'll do some more.

5. Marion R (8 years).

Marion produces the only cel animation in this group. Her idea is to show the growth of a plant from seed to full development and she produces forty drawings with this sequence portrayed in color. She confesses in her interview to liking the shooting most because the drawing got to be boring, very, very boring.

I: What did you think about the way it came out?
M: Um . . . It looked too square, like it was going, forming too unfree like the plant was growing stiff.

She was not too happy that it was put only on black and white film after being drawn in color. She was clearly not over excited about doing another film, but not totally opposed to it as seemed to be the case with Robin and Jessica.

6. Pam W (7 years)

Pam's script was entitled, "The Story of Sam."

> This simple little Sam lived in a Junkyard. and as I was told he liked it there. When people came to throw garbage in the ditch he ran to see if there was any food and thats how he ate. But one day the man that ran the junk yard cleaned it. When it got to high with garbage bags and he scooped up Sam Poor Sam had to leave his Junk Yard. He was very sad.

According to Pam, Sam was to be partly human and partly animal. She made a storyboard of the account. Not understanding the relationship between the number of frames exposed and the length of the film, nor the need to show motion small step by small step, however, Pam took four frames of each of the four panels of her storyboard and thought she had made a film. The resulting piece of film, which lasts two-thirds of a second, is almost unseeable. She was bemused upon being shown her "film," but seemed to grasp Carlos' amused explanation. Without much enthusiasm she then began making a set of drawings to be used in making a true cel-type animation. She completed approximately twenty drawings but became discouraged and essentially gave up on the project. This occurred well into June, leaving little time to do the necessary work at any event. Once again in the interview she complained of the process, and said that having to draw so much was boring. Everyone else did better films and the only good thing about it was that it was her first film.

Summary.

This review of the films produced by our seven successful students shows that only three felt they enjoyed the process (Rose, Jason and Larry) and that in those cases there was a fairly intense relationship between the tutor and the student. None of the other four girls enjoyed the experience particularly and as their interviews showed some were most resistant to any further discussion of the matter.

Our conclusion to this point must be then that teaching films by these methods to very young children (in this case seven and eight years of age) does not work very well unless there is a very close apprentice relationship between teacher and student. Given such a relationship the children can, however, produce a reasonable result. In particular, cutout animation (Jason) seems to facilitate a fast production which relieves the child of too long and too intense a child-teacher relationship.

The Drop-Outs

One way to attempt to come to terms with the process is to compare those who dropped out with those who stayed in. Were the five drop-outs in any way different from the seven who stayed in? A number of tentative possibilities present themselves.

1. Gender.

Five out of six girls remained. Two out of six boys remained. Whatever happened here produced a near statistically significant sex role effect, which was for boys to drop out and for girls to stay in ($p < .12$). The simplest explanation in sex role terms would be to say that the rather extreme dependency required in this apprenticeship situation is more easily tolerated by girls for whom it is sex role consistent than for boys for whom it is not. The extracts from the observations produced above show that the relationship between Rose and Susan is much more of a dependency relationship than the relationship between Carlos and Jason or Larry where a quality of aggressiveness obtains. It is as if the boys were fighting the very dependency that was required of them to learn in that situation--though it was probably easier for them to do this with Carlos than it would have been with Susan.

It is noticeable that none of the girls except Rose really enjoyed the process as judged by their exit interviews. They did not get the comparable attention that she did to pull them through the more tedious aspects of the process.

2. The Crisis Day.

The rates of attendance throughout the period were as follows:

Date		Number Present (N=12)	Names
April	7	7	Rose, Jason, Nicole, Marion, Bruce, Tony, Collin
	8	5	Robin, Jessica, Larry, Mark, Pam
	14	6	Rose, Jason, Marion, Tony, Robin, Jessica
	21	5	Rose, Nicole, Tony, Collin, Larry
	22	2	Rose, Jason
	28	3	Rose, Jason, Robin
	29	4	Rose, Jason, Nicole, Larry
May	5	2	Jason, Marion
	6	2	Jason, Pam
	12	3	Rose, Jason, Marion
	13	4	Rose, Robin, Jessica, Pam
	19	3	Rose, Robin, Jessica
	20	2	Rose, Pam
	27	5	Rose, Jason, Robin, Jessica, Pam
	28	1	Rose
June	2	4	Rose, Jason, Robin, Jessica
	3	2	Jessica, Pam
	9	3	Rose, Jason, Larry
	10	1	Rose
	16	1	Larry
	17	1	Rose
	23	1	Rose

We noted that the order of attendance is very closely related to success in film production. Four of the drop-outs do not return after the fourth session and the other, Nicole, comes but once. Rose attends 17 times; Jason, 12; Jessica, 6; Robin, 7;

Pam, 6; Larry, 5; M ion, 4. The drop-outs attend: Tony, 3; Nicole, 4; Collin, 3; Mark, 1; and Bruce, 1.

It seems that on the fourth day both Susan and Carlos are worried that this group of rather young children will not produce any films. Various excerpts from the transcripts will set the tone for us. In general, we can say that Nicole, Mark and Bruce never are very involved from the beginning. They are seen only on the fringe of the activity of the others and there is no great surprise when they do not continue with the group. Collin and Tony, however, are certainly as imaginative in their ideas as anyone else present in this group. It is illuminating to see what happens to Collin for whom this is a critical transcript on this particular day. Collin has been into his own story from the very first day. He is all fired over a story about an explosion of rocks. By the second day he has made a storyboard of twelve pictures which set out his progression of events, and he also brings along some rocks on that day. On April 21st the encounter between Collin and Susan proceeds as follows:

April 21.*

(9:55) S asks the group if they have decided on a story. She says this as if she is trying to persuade them. The message appears to be: you must do it. Collin (C) walks in, comes around the table and joins the group. S(to C): The first day you started on the storyboard. (C gets his storyboard sheet and begins to explain it to S.) S: There aren't just rocks. There's all different things. What is this? (C explains rocks. S suggests they go away from the group to sit on the floor together.) S: The rocks, what are they going to be on? C: I think they're going to be on a flat tile surface. S: I have some soil maybe you can use. Take out a pen. Describe the set here (pointing to the paper in front of him). What are you seeing? How are you seeing them? The thing about making the movie, you're showing the relationship between the camera and what you're showing. (S tilts the paper.) We will call this the shot list. It has two parts. One, the description of the shot. That is "from above" or "rocks on tile." C: I don't think I can get this all down in this amount of time. S (not agreeing and going on): So you have three choices of shot type. If you have all the rocks, long shot, medium shot if you have only a few, or close up. (S draws images of what each would look like on the shot list.) You can do millions of things. These are just the basics. C (nods): But most films you see don't show just one thing. You zoom in slowly, or come up. A film I saw showed this man's face up close then till he was smaller and smaller till (the view) was way above him. (S gets the "Young Animators" book and looks through it, stopping at page 15.) S: Film is divided into frames. C: I know. S: Let's see if they have any decent set-ups. They way they decide about speed . . . (S gets a piece of film.) These are frames in Super 8. The speed this passes before the lens in the projector is the speed of the film. These are 24 frames per second. With live action the film is moving, but with animation nothing is moving so you have to click the film. C: Somebody told me in animation you don't have so many frames. That means they don't look exactly like they're moving.

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* The observer is Ken Frey.

(10:10) S (explains): It's not how many frames there are per second, but how many shots per movement. The object is to show this (holds pen and moves it across the paper). If you shoot six, then move it, and six again, it'll look jerky. If you shoot one or two and move it just a little, it'll be less. C: I know it will look jerky. S: It won't look jerky if you make small movements every three frames. There is a proportion between size of movements, times and number of frames. You will see this relationship. C: Well . . . S: Let's start. What's the . . . C: I still don't think I understaand. S: You can't unless you do it. Start. C (hesitantly): Okay, I think it will be a long shot. S: From where,above or below (referring to the first shot description)? Let's go. It's necessary. C: You don't understand. I'm very slow at writing. If I do this it will take a week. S: Well, let's just start. What does the picture look like?

(10:15) Collin takes the pen in hand. S opens "Young Animators" to page 112, a picture of animated cars. S: How would you describe that? C: Mmmmm, cars in vacant lot. S: Okay, yours is rocks on tiles. Same thing. Come on, write that down. (C writes "Rocks on tiles.") S: Okay, a long shot from what angle? You did the picture (storyboard). C: I don't think I can do this. It's just too long to write. (C counts twelve storyboard boxes.) There will be three times that. I could spend the whole day doing this. S: If you want to make a movie this is the way. (C seems unconvinced. His face flushes.) S: Okay, you talked about it for ten minutes. Let's do it. (C starts writing with S supervising. He writes, "Rocks SLOW MOVE IN.") C (while writing): This is humiliating. S: If the camera stays the same, write "same." It's often the same in animation. (C writes, "same.") C: I think I'll keep it (the camera) the same for three shots. S: You want the same long shot? It could be the same long shot but a different distance. Okay, what's happening here? C: Rocks are forming four straight lines across. You can see (points to the storyboard). S: Okay, the storyboard doesn't show it. Write it down. C (repeats): I don't think I can do this. It will take two long. (C calculates in his head.) A month. (S sits motionless.) I don't think I can do this. S: You decide. Kids older, younger I tell and they do these shot lists. What grade are you in? C: Fourth. S: Okay, you should be able to do it. Come on. C (reluctantly): Oh, boy. The rocks go in and form four lines. S: Let's not talk about this stuff any more. Don't worry about it. Just write it down. (C mutters protests.) S: Okay. (10:26) S gets up and goes away.

(10:27) C goes through each of the boxes, talking out loud to himself. C: I . . . oh . . . eh . . . (to O:) I have two words for this impossible . . . O: That's the way she (S) feels you must do it. C: I know. Two hours. Let me just think it out and take it home. (C sits thinking to himself. He gets up and goes over to S. He tells S the next box.) S: You can write it. C: I can't come here half hour each week. The quickest way I can do this is to take it home and write it. S: Yeah. (S agrees and says she has said that already. C goes back across the room and sits in his chair near O. He tells O that he just wants to tell how much writing is involved in the story. He explains fast an "undetailed picture" shot list. He says that the rocks form a triangle, place themselves before a door . . . that the lines on the house are going to be rocks . . . that the rocks form the chimney and rocks form four windows on all sides of the house, then a car drives up, two rocks come out through the door, and the door closes. And he adds, "I must also write shots." C gets up and paces around.)

(10:40) O: Where did the story come from? C: Just popped into my head. By looking around and seeing things. Watch, I'll show you. (C looks around and makes up a story about a trash can and radiator, which are both in his view:: The trash can starts talking with the radiator. The radiator answers back. Then one gets angry at the other, but conversation continues. The story seems quite related to his relationship with Susan. C tells the O that he originally thought of a vegetable movie. The vegetables move around and do funny things. The O asks if C saw an animation with geometric figures the first day. C says he did but it was really boring. C goes over to an adjacent table where Larry, L, is practicing with the camera. He walks around the table. L puts the camera down and C picks it up.) S (not moving from where she is sitting and not in a high voice): You know what you have to do. Do it (telling C to go back to work). (C gently puts the camera down and returns to his chair. He sits thinking to himself, making mouth movements, murmering.) C (to O): I think I'm wasting time, just trying to do this. I think there's absolutely no purpose to this. (C tells O that with the amount of time they have it doesn't seem practical to write out such a shot list.) C (in a low voice to himself, but loud enough for O to overhear): I think I can get it done much faster if someone does it for me. S (to C): Hey, C, how are you doing? (S has called from across the room. C walks over to her.) S: You've been telling him (O) how long it's going to take, and meanwhile a half hour has passed. Do you have any real questions I can answer? C: No, I don't. S: Making movies takes time . . . Let's not think about the time. C: This is not a handwriting class or a spelling class . . . S (interrupts): I don't care about your handwriting or spelling. C: This is a film class. I could describe it (his story) in five minutes. S: How do I know that? It's not necessary to write more than this (pointing to the story list he has started). It didn't take more than five minutes. C: I know, but . . . S: If you did the . . . C: These first (frames of the storyboard) are so simple. These four columns moving in. S: Okay, write it down. (C writes.) C: It would go faster if I could dictate to you. You could write it down faster. S: It makes what you're saying . . . You've been saying this for so long. It's becoming an issue. You're doing it. It's a private process that you're trying to figure out. When there are so many people, you do turn to them. So if you want to be alone, you can go outside (into the hall). C: I don't think that'll help. Unfortunately, I'm not a copying machine. I have this human quality . . . and that (the situation) affects it. I think I'm under great pressure. S: I think you're under pressure, too. C: When there's just one way to do it. At my house I go as fast, but here there are so many other people. S: Of course, there are. C: That's why I want to take it home. (C is getting ready to leave for lunch. S reminds him and summarizes his shot list sheet. She discusses long shots, medium shots and close shots, and different angles. C must go to lunch. He gets up and leaves, making a joking gesture at the door. S suggests that if he likes he should come tomorrow.)

Collin did not return any more. Anthony, who was equally imaginative in the early days did not return after this date either. We did, however, record snatches of conversation by the teachers and it appears that the Susan and Collin case was not simply an outcome of Collin's resistance, although he did tend to be rebellious and his other stories of which we have record show him to have fairly negative attitudes towards teachers. Thus, Susan speaking to Carlos says in the midst of her interaction with Collin, but to Carlos: "I highly resent . . . their just begging for attention. I can't do it. I can't do it." And later, "I object to so much individual attention." Chris, the other teacher, responds, "I know what you mean. If it gets going, it's a drag with them floundering."

It is clear that the forced dependency of the relationship could be difficult for both student and teacher. After this date the teacher, Susan, spends time almost entirely with the one student, Rose, leaving the rest for Carlos. From then on he is everyone else's teacher and especially attempts to provoke in them the kind of independence which educators widely assume is desirable in children undergoing experiences with artistic media. At least that's what we told him.

3. Related Characteristics.

To this point we have suggested that the close apprenticeship which this kind of teaching of a complex technical process required with children of this young age had differential effects on different children. Being a female seemed to make it easier to undergo this process than being a male. Or perhaps it was being a female with Susan as teacher. This is difficult to elucidate because after the crisis day the major burden of those who stayed fell on Carlos and he seems to have achieved more with the boys (Jason and Larry) than he did with the girls (Robin, Jessica, Marion and Pam), the implication being that if you have to be in a dependency relationship it might be easier with the same sex adult. Or, putting it alternatively, the greater amount of independence demanded by Carlos may have been harder on the remaining girls than it was on the boys.

The other characteristics of the children themselves which might have contributed to the situation where some dropped out and some stayed in are as follows. The numbers are too small for these to be anything more than rather tenuous and hypothetical suggestions. They are:

(a) All of the boys who dropped out were either in observation group A or in observation group B. That is, the boys who were most studied in the earliest weeks were also those who dropped out. The boys who were least studied in the group (Jason and Larry) were those who stayed in. To be observed, again, is to be in a condition of some dependency, or at least it does not foster the child's own feeling of independence. There was no such comparable result with the girls. The one girl who dropped out was in group B. It is interesting to speculate that an observer effect, when associated with these conditions of a highly dependent apprenticeship might be more difficult for boys to sustain.

(b) The one girl (Nicole) who dropped out was both young (age 7) but also of much lower I.Q. than those who stayed in. Her I.Q. was average while all the rest were superior. Although she began to work on a story and shot list, this was never complete and she did not continue. She often said she was bored.

(c) There was a slight tendency for those who stayed in to have had more prior experience of film making, as judged by their responses to the pre-interview.

(d) The girls who stayed with the enterprise were all first born girls with younger siblings. There is considerable support in the literature for the view that first born children are more capable than non first born at making use of a dependency relationship for personal achievement. Unfortunately, first borns also volunteer more for such enterprises which obscures the real reason for their presence (Sutton-Smith and Rosenberg, 1970).

(e) The two boys who stayed in, Jason and Larry, from the very beginning showed a much greater interest in the technical aspects of film making than the two boys of equal involvement who dropped out, Tony and Collin, who seemed relatively more preoccupied with their fantasies.

Conclusion

In analyzing the reasons for success in film making under these conditions almost all the posential hypotheses point either directly or indirectly to the importance of the character of the relationship during the teaching process. This relationship required the children to be close and dependent upon a teacher who responds ambivalently to that dependency. The children were also observed in this relationship by the research team throughout. These effects, however, seem to have depended also on the sex role and birth order of the students. Girls of first born ordinal position seemed most likely to volunteer for such relationships and to succeed with them. The whole situation seemed much more difficult for boys.

It is clear from the past two chapters that in asking the Young Filmaker teachers to work with children younger than those to whom they were accustomed we were perhaps forcing them, at least Susan, into a role to which they were also not accustomed. We were making her relate to children who could not respond with a degree of autonomy that was gratifying to her. Except in the case of Rose with whom she worked so hard, she did indeed appear to find a satisfying and, as it turned out, successful relationship. We are inclined to the thesis that in a student-teacher relationship there are varying mutual balances between dependence and independence, and the needs for a particular ratio will vary with the teacher. Susan could tolerate the relationship with Rose. She could not (also) sustain it with the others, or, alternatively, could not sustain the kinds of relationships they were prepared to give her (Collin, etc.).

All the other wishes for this particular project were not fulfilled. Our project began late and the school year ran out before most of the films could have their sound strips added. Indeed, by the end of the term even most of the "successes" had lost interest in their project in any case. In addition, although we started teaching with the children on April 7th, we still could not start testing them in many cases because permissions were not yet in. As a result, the testing became one shot testing rather than before and after testing. All we can say from that testing is that it was relatively unrevealing of differences between stay-ins and drop-outs in terms of I.Q., Creativity and Field Independence. But we shall return to these matters later when we take up the Ludlow Workshop once more.

There is one final kind of data on five of our seven "successful" children which is very relevant to some of the analyses of the succeeding chapters. During the year preceding this study, as well as during the year, another team of researchers was collecting narratives from them under conditions of very considerable freedom in story telling. We have selected from their files the story which was told at the nearest adjacent date to the film making activities. It will be seen that in general their stories as narrated out of fantasy to the storytakers were, by and large, much more complex than those stories which they offered to Susan and Carlos in preparation for film making. So we are left with the question of why a story told in one circumstance should be so different from a story told in other circumstances. Why has the envisagement of film making so suppressed their story telling competence, a point to which we will soon return.

1. Rose (May, 1975).

> Once there was a girl named Elizabeth. She thought she was the ugliest girl on her block in New Rochelle (except for the retarded girl on her block.) One day she was walking with her friend Melony and Melony said to Elizabeth, "you ought to get the job helping karin the retarded girl on your block." "Oh I didn't know that they needed a job and anyhow why would anybody want to have me for a job." Said Elizabeth. "Your wonderful with kids" said Melony. "Well" said Elizabeth "I'll try it." "O.k. but you have to go and try out for the job. you will get 2 Dollars a week"! said Melony. "I'm trying out for the job too." "We'll go to the place tomorrow." As they walked up to Melony's house, Melony's boyfriend walked up and said "come on Melony" Elizabeth said "Hi Joey and Good-bye to Melony and walked away. Wow said Elizabeth 2 Dollars a week! To bad dad is'nt here. He had died two years ago when she was 12 she is 14 now. He had been killed in a hit and run. Her brother almost went into shock. All of a sudden her thought's were interupted

because Phillip (her secret Admirer) bumped into her. "Hi" he said (Elizabeth hated him). "Hi" Elizabeth said. "um, Phillip I have to run" said Elizabeth. And she ran! When she got home, her cheeks were red. When her mother saw her she said "What have you been doing"? "Nothing" said Elizabeth and walked into her room. Her brother came running into her room "Lizz Lizz I got the job doing a paper route"! "Wow that's great" said Elizabeth. Her brother Andy was 12 and very cute. She walked out into the kitchen. "How was school today lizz" "o.k" said Elizabeth. "Oh mom tomorrow I'm trying out for a job with karin". "That's nice but are you sure it won't upset you"? "Oh mom I'm not a baby anymore so please don't act like I am, I'm 14 now." "Well I'm not gonna be talked in like that now go to your room"! "No" said Elizabeth and grabbed her coat and walked out. She was walking down the street when Buddy a 16 year old kid that every girl had a crush on came over and said hi Elizabeth Would you like to see a movie with me"? O.K. said Elizabeth. As they were walking Elizabeth's heart felt sky high. Buddy said "Were gonna see law and Disorder." I was just coming over to ask you if you could come to the movie's with me,oh bye the way I alway's liked you." Elizabeth smiled. Than she noticed that they were'nt going towards the movie theater. Than she said,, "Were not going towards the movie theater"! Then Buddy said "I know I'm taking you to the park reserved a seat." "Oh let's go". said Elizabeth. When they got there they sat down Buddy put his arm around her. Then she put her head on his shoulder. Then he kissed her. Elizabeth's head went into a whirl when they stopped kissing. Had Buddy really kissed her, her the uglyest girl on the block be kissed by the cutest boy in town! Elizabeth thought it must be a dream. But then he kissed her again and he kept kissing her until she asked how late it was it was 12 o.clock then she said I have to go and he walked her home she saw an ambulance in her front lot. "Oh no" she cried and Buddy ran in with her there they saw Elizabeth's mother on a stretcher "What happened she cried. One man said she had a bad heart attack but she might still be saved. "Oh god" she cried "Andy"! Then she asked if they had seen a boy about 12. The men said "No"! Elizabeth was already running into the wood's in back of the house. Buddy ran after her when he found her she was at a tree house comforting Andy. At least he didn't go into shock again! They brought him home and put him to bed. Buddy called and told his mother that he would stay with Elizabeth for the night because Andy kept waking up. Then finally Andy fell asleep. Then Buddy kissed her good-bye and left, so in the morning Melony ran over "I couldn't get over last night my mother wouldn't let me come over." "Oh bye the way are you coming over to try for the job"? "Well it depends on if Andy goes to school." "And he's still ssleep." "Oh wait here he comes, hi Andy how are you honey?" "Hi Andy" said Melony, I'm sorry about what happened." "Yeah I know" said Andy "It's terrible." Melony Asked him if he felt like going to school. He said "yes." So Melony and Elizabeth walked him to school to tell his teacher why he was late. The teacher said "that's terrible should I announce that to the class." "Well" said Elizabeth "that's up to Andy." "O.K." said Andy. So the teacher told the class. It seemed O.K. then but at recess kids were teasing him. He got so upset he ran out of the school yard and kept running until he came to the highway and he still kept running until he almost collapsed. Then he just sat on the highway. Then when school finished back at the school the teacher was collecting acting class kid's and When she came to his name he wasn't there. The teacher asked, "Where is Andy." Andy's friend Micheal said "kids were teasing him and he ran away towards the highway." Then the teacher asked him who teased, Micheal said"Sandy Dennys and Tom." The teacher said "Micheal would you take a note to all their teacher's and ask if they could let their kid's come to this class." "O.K." said Micheal. So When the kid's came to the class the teacher said, "Why did you tease Andy about his mother." And they said "Well it's tough and other thing's like that." so they were sent to the principal and they were expelled for two day's. But at Elizabeth's school all the kids were coming up to her and saying "Oh I'm sorry." But at the end of the day Buddy came over and took her by the hand and said "I just got the message Andy was being teased and he ran to the highway." "Oh no" said Elizabeth. Then she said "We might still be able to find him." "How" said Buddy. "Well We could go to my friend's house she has a car we could go and look on the highway." "Come on." said Buddy. So they ran into the girl's house and told her everything. Then sue said "O.K. Come on." So they went in the car looking for him. They were driving and they saw him. They stopped and Buddy got out and got him in the car. Then he said. "I'm sorry I ran away like that." "That's o.k. Andy I would have done it too." said Elizabeth. "I would have done it also" said Buddy. "Now we'll take you to Acting class. And Me Andy Melony are gonna try out for the job with karin. So they brought him to Acting class and went to karin's house. When they got there karin's mother said "Are you here to try out for the job"? And Melony replied "yes we are Missess Donald." Said Miss Donald. You can come in one at a time girl's. Melony went in first. And when she came out Mrs. Donald told Elizabeth to go in. When she came out she said "I'll send the one who made it a letter." So that night when Andy came home she made a very unfancy dinner And Andy went to bed early. Buddy came over for a little bit and they talked and then he left. Then a very dissapointing visitor came! A foster adviser came. Elizabeth was sitting watching t.v. The doorbell rang and she Answered it. it was the foster Adviser. They told her about her mother and that she probably would not be home for a few months. Then Elizabeth said "If we had some grownup or relative then could we stay here"? "Yes you could" they said. "But do you have any"? "Well" said Elizabeth we have my father's mother but she's in florida." "Well" that's a very tough position your in." "I know" Elizabeth said. "But can't we just stay here until my mother comes back"? You could do that if you were 18 but your not." Then Elizabeth said "Well I'm not leaving this house so you and your partner can leave"! Then the lady said "Well I'm not going to be talked to like that young lady"! Then Elizabeth said "Well I'm not leaving this house so good-bye"! And she shoved them out the door and locked it. The next day she sent Andy to school and waited for Melony to come it was friday then all of a sudden Melony burst in "Lizz Lizz I got the job working with karin"! "That's nice" said Elizabeth (she wasn't really so enthusiastic about it. I'm going over there now so Mrs. Donald can tell me what I'm going to do!" Well thought Elizabeth I guess I'll go to school without her. But then she called back to Melony and Asked her when she would work. Melony said Monday After school and friday After school. "O.K." said Elizabeth and said good-bye. Just then the telephone rang it was her mother. "Oh mom how are you?" "I'm sorry I yelled at you last night. "Oh that's alright honey" she said.

"Oh I might not go to school today." "Now Honey I don't want you to stop school just because of me." "Well good-bye." Then she hung up. Then she started for school. While she was walking Buddy came and they were walking together then he said "um - Elizabeth would - you go out with me?" Elizabeth said "yes!" "I'm gonna come over tonight." "O.K." said Elizabeth. So that night he came over at 7:30. Andy was asleep. They sat down on the couch. Buddy put his Arm around her shoulders. And hugged her close. Then they kissed. And they talked and had a lot of fun And then Buddy had to go he said "good-bye" And left. The next day it was saturday. Andy wanted to see A movie with Elizabeth, and Elizabeth wanted him to go with a friend so she could go with Buddy. Now I want to tell you What Buddy and Elizabeth and Andy look like. Now Andy looks like a tough kid he has dark skin, his hair is brown and down to his neck. He has a big figure. Elizabeth has blonde hair has well not a great figure she had a pretty face and a sort of pretty figure and short. Buddy is tall he has a shag haircut and husky figure. Blonde hair. Now about the movie's Andy decided to go with his friend. And Buddy and Elizabeth went to the movie's. This time they saw Towering Inferno. They really loved each other. That night Andy couldn't sleep so Melony came over they talked a lot. Then Andy came out and said "Can I speak to you Lizzie?" When Elizabeth went in he started crying "I-I want d-dad." Elizabeth said "I know oh don't cry Andy." She took him in her Arm's and said "It's allright it's allright." Just then the telephone rang "I'll get it" cried Elizabeth. "Go back to bed Andy I'll see you in the morning. She ran out to answer the phone, She did Answer it was the foster Adviser again Elizabeth said "Oh you again Well if it's about leaving forget it o.k.?" No it's not O.K. Now listen if your gonna be like that to me forget trying to ignore me about going to a foster home because you are." Elizabeth said "well I'm going to ignore you whether you like it or not good-bye!" And of course she hung up. Melony who had been listening said "What was that all about?" Then Elizabeth went through the whole story over again. "Oh you could stay with us in my house" Melony said. "Hey that's a good idea" Elizabeth said. Then the phone rang again. "You Answer it Melony and if it's them say I'm out" "OK" Melony said. Then she answered "hello, oh Buddy wait a minute here she is". Then Elizabeth took the phone "hello, buddy hi." Then Buddy said hello Elizabeth can I come over. then Elizabeth said, "Oh sure come on over see you in a while." And she hung up. Then she said to Melony, "Buddy's coming over and I want to be alone o.k. good-bye. Five minute's after Melony left Buddy came over "Hi" he said "let's sit down, so they sat down. This time he brought over a bottle of wine so they had a few drinks and then he had to go he kissed her good-bye and left. But when he left she looked out the window and saw Joey and Melony talking to him about something! The next day she looked on the calendar her birthday was next week she would be 15. "Andy!" she called today they were going on a picnic with Sue Buddy Joey Melony and Sue's boyfriend Bill they were going up to Bear Mountain. "Andy!" She called again. "I'm coming" replied Andy. "Well hurry up sue and the gang are coming to pick us up in a few minute's." "O.K. O.K. here I am." Alright we have to wait for them to come now!" Beep! Beep! Beep! "That's them" Andy said he flew out of the house. Then Elizabeth came out and got in the car then they were off! It was a nice sunny day. They were talking a lot until they got there. Sue cried "were here!" Andy was out first he was climbing up a tree. They had a lot of fun then sue treated them out to dinner and a movie. Then they went home. Elizabeth noticed that they were running out of money. so she said "Andy I'm going across the way to Melony's house to borrow some food." "Alright come back soon" he cried. "O.K." Elizabeth said. so she went across the way to Melony's house. she knocked, no answer. She ran home and got Andy. Then he pushed the door open and All of a sudden the light's went on then, "Happy BIRThDay! She looked around it was Sue, Bill, Buddy, Melony, Joey, and Melony's Mother! There was a big pile of present's and the house was decorated. Then Buddy said Elizabeth open the present's. She went over she took the largest one. Guess what it was! It was a big record player! Then she opened the next one it was a pretty pink shirt with a heart on it. It was from sue. The record player was fron Bill. Then she opened a tiny little package it was from Melony. They were earing's they were little gold flower's with a blue stone in the middle. Then there was a middle size package she opened it, it was a bottle of perfume from Melony's Mother. Then there was the last one she opened it, it was Buddy's I.d. Braclet they were going steady! She gave him a kiss And they sat down to eat. They talked and played and then everybody started to leave Buddy came over after the Party Andy was Asleep then Buddy left. The next day was Monday Andy went to school and Melony and Elizabeth went to school too. Today was exam's in Elizabeths class she was very nervous not only because of exam's but because she was going to a party with Buddy. Also she said she would come and she has nobody to stay with Andy because Melony has to work with Karin! Who could stay with him. Oh no my exam's so she went to work. There she finished and the bell was going to ring in a few minutes! Ding! Ding! Ding! There goes the bell. Elizabeth was up and running before anybody was even up! She ran out of the school. On the way home she met Buddy, he said, "Are you coming to the party?" "Well" said Elizabeth "I'm not sure; you see Andy has to stay with someone." "Oh that's no problem" Buddy said "My big sister will sit." How old is your sister, oh she's 20 and my little brother is 14. And Also my little sister-she's 12. And my mother is pregnent again." "Wow" said Elizabeth "that's a lot! "I know" Buddy said. so that night Buddy and Elizabeth went out and Julia his sister came. When they got to the party they went in and A girl came over she said, "Hi Buddy this must be Elizabeth." "Hi I'm Carole come in and make yourself at home." So Elizabeth took her coat off. Then Carole said Now I have a surpise for you. We have the group Chicago here to play for us. So they played a few song's then they played 7 Minutes in heaven. Elizabeth got called by Carole's boyfriend And Buddy. Buddy got called by A girl named Erica And, Elizabeth! When Buddy took her home she kissed her good-bye And left, so did his sister. The next day when she was walking with Andy to school at the house next door there was a moving van she looked and saw a girl stepping out of a car. Elizabeth thought, Why she's beautiful! She had long brown hair, black eye's, beautiful figure! She was wearing tight jeans And a nice print shirt. And then a lady that looked like she was her mother's Age, got out and payed, it was A taxi. Then the lady called "leah Come here and take your suitcase!" Then Leah saw Elizabeth "Hi" she said. "Hi" Elizabeth said. Elizabeth Asked "Are you moving in"? "Yes" the girl said. Then Elizabeth said "Well good-bye I gotta go now." Then she and Andy walked off. On the way to school Buddy came over. "Hi" he said. I hear that A knew girl is moving in. "Yeah" Elizabeth said "she moved right next to me! Then Buddy said "I suppose she'll be coming to school." "Yeah I suppose so!" Elizabeth said. When they came to Andy's school he went in then. When they got to Elizabeth's school they both went in. At Elizabeth's Math class A teacher said "Elizabeth please do this problem for us" But Elizabeth was too busy thinking About leah. What if Buddy falls for her and- "Elizabeth please do this problem for us." the teacher said. Then Elizabeth got up And started doing the problem. Then At the end of the day she went out of the school she was walking with Buddy. Andy was doing the paper route,) Leah came over And said "hi" hi Elizabeth said "this is Buddy, Buddy this is Leah." "Hi" Buddy said. Again Where Are you going?" Then Leah said "Oh I'm just going to register for A class, I think for homeroom I'll get Ms. Barlow." That's my class" Buddy said. "Well" Leah said "I gotta go now bye." Then she walked off. Buddy said "She is really fancy I don't really like her." Well Elizabeth thought, that's A relief. When they got home to Buddy's house, he Asked Can you come over to my house tonight. Everybody is going out And Andy can stay home Alone can't he?" "Yeah I guess so" Elizabeth said "see you later." Later, right after dinner Leah came over when Elizabeth was About to go to Buddy's house. "hi Leah said "hi" Elizabeth said. "look I'm going over to my friend's house so can you leave. She said good-bye to Andy and walked to Buddy's When she got there they had A lot of fun then she left. When she got home she heard someone sobbing, she ran into Andy's room, he ran to her crying "I want dad." Then the phone rang!

the
n
d

2. Robin K (February, 1975).

In the city, there is a pool that is very cool, but there is a rule: no diving in the pool. So it isn't very cool, but someone broke the rule, so now the pool is closed, but nobody knows. So their toes are very very cold, but when they got old, the pool was sold. In the summer, in the city, it was no pool. The people said, "What a pity." So the city has no pool, so nobody is really cool.

the end

3. Jessica R (March, 1975).

Once there was a little fox. A fox and a little bear. The bear's name was Brownie, and the Fox's name was Reddi. The foxe's name was Reddi because he was always ready when you needed him. The bears name was Brownie because he went with the brownies on hikes. One day, there was a brownie hike and Brownie was sick. He was very, very, very sick and he told the girl scouts he was very sick and they told him if he was sick one more time they wouldn't let him go on hikes. One day he was sick again when there was another hike. He went over to Mr. Fox's house and he was as ready as he could be. Brownie said, "Can you dress up like me and you be me and I will be you for the day?" "O'kay", said Mr. Fox and Brownie gave Mr. Fox some fur to put on as a costume and then they looked in the mirror and saw that they were just alike. Then when Mr. Fox came home Brownie was all well again. "I am glad to hear that you are o'kay now", said Mr. Fox. "Oh!, I am just fine", said Mr. Brownie. How was the hike? "Oh!, just fine", said Mr. Fox. Did they find out that you weren't me? "Of course not", said Mr. Fox. What did they do on the hike, said brownie. Oh!, climb rocks, and played in the grass. I am so relieved you are better because those hikes are a little too steep for me. "Oh!, same with me," said Brownie. "Good night", said Mr. Fox. "Goodnight", said Brownie. In the morning, Mr. Fox came outside and saw it was raining. He went inside and got his umbrella and went to Brownie. It is raining, can I stay for the day? "Oh!, of course", said Brownie. "You are very very kind", said Mr. Fix. "Thank you", said Brownie, so are you. Tomorros, I will take you on a hike, but not climbing hills and trees. Oh!, fine if it is a sunny day.

In the morning, they looked out the window and the sun was shinning in their eyes. Let's go out and dig a hole and put water in it and they did. Let's get wood and make a diving borrd, so they did. They swam and swam all day. "That was a fun day we had wasn't it?" said Mr. Fox. Yes indeed it was. Well, the sun is shinning now, do you want to take the hike asked Brownie. Its getting a little too late, maybe tomorrow. Fine answered Brownie. In the morning there were beautiful clouds in the sky and the sun was shining like gold. OH!, I am going to run over to Mr. Fox said Brownie. Mr. Fox, Brownie yelled, rise and shien, it's a beautiful day. Mr. Fox ran out and they played all day. Wasn't that fun they both said. Wh, well see you tommorow and tomorrow we will definitely go on the hike. Bye-bye said Mr. Fox, bye-bye said Brownie. See you tomorrow. They opened the door to their house and made their supper. And in the morning they definitely went on the hike through the lakes and streams and grass. The sun was shinning like gold and diamonds.

The End

4. Jason B (January, 1975).

The Bear and the Hare
The bear went over to the hares house and the hare said, "Why did you come over?"
The bear said, "Because I wanted to see you hare."
The hare said, "You don't have bad hair yourself."
The bear said, "I thoust that hares were rabbits."
"You're absolutely correct," said the hare.
Then somebody knocked on the door. "Guess who it was!" said the bear.
It was Cecil, the local tortoise. Then he said, Hello there."
The rabbit said, "I bet I could beat you in the race."
They went to the field to start the race. Bear was the referee. Bear said, "Go!" They went but not Cecil. He went to the telephone. He called his brothers and he told them that they had a race and that they'd make money if they did this thing for them.
Cecil said, "Everybody start from their house and get in front of him. and say to him, "Hey Speedy."
The hare climbed up a tree to see if the turtle was behind him. He was under the tree. He said, "Nice view, huh?" The hare said, "What? That slow twirp turtle under me? He's supposed to be in back of me."

The turtle started off and said, "See you, Speedy, and I'll send you a letter from Miami, Sammy" But that didn't fool the hare. The hare thought if he mailed himself to Miami he would beat the bear. So he got in a box with five dollars of stamps on it and went airmail. He got to Miami and the box was addressed to Cecil Turtle. Cecil said, "You shouldn't have, Doc." Then the hare got so mad, he blew his stack, but he forgot if he got a stack-a-mac he got a stack-a-mac from MacDonalds (a game). If it wasn't for MacDonalds, who knows, there might be a war between the turtles and hares. The only one left would be the box turtles and if there was any hares left they would put on hundreds of air mail stamps and go to Albuquerque.

Guess who walked in? Cookie Monster! "Me want cookie!" (J imitates the characters' voices in the dialogue.)

Then the Cookie said, "Stop this unnecessary feuding between turtles and hares. It would be better if the cookies had a war with the cookie monsters, we eat them up!"

Then the hare and the turtle shaked hands but everyone forgot about the bear. The bear said to the Cookie Monster, "Do you want a cookie? That turtle is out of his shell and there's lots of cookies in it." Then Cookie said, "Yum, yum, cookies in cookie shell." Cookie went over and grabbed the shell. Then Cecil saw this and he was going to rescue and that started a feud between the Cecil turtles and the Cookie Monster. ("I have a Cookie Monster puppet.") Guess who came in the door? Ernie and Bert. Cookie Monster said, "Maybe you can stop this cookie nonsense." The turtles were swimming in the sea and I got the cookies from the cookie shell and I started a feud." Ernie said, "Yah, I think I can stop this."
He gave one billion, trillion, killion cookies to Cookie Monster.
"Yum-ymm", said Cookie.
They all had a big feast, but uh, oh another feud being started, what about Ernie. He didn't get any pizza.
"I'm going to dictate this," said Cookie, "Now everybody shut up."
"Yeh, yeh, what do you want?" said Ernie.
Cookie describes turtle-hare race and the feud between the Ernies and Berts has stopped. He said, "Let's stop this Cookie nonsense. Shake hands and be friends."
Cookie said to Ernie, "One, two, three, good-bye, good-bye, goodbye."
the end

5. Larry O (May, 1975).

Nixon's Favorite Menu

UnAppetizers

Cross-eyed Goose Egg broiled in butter made with mustard, relish, 6 pounds of flour and plaster from the ceiling.

Our appetizer special: Cross-eyed Chicken's Egg also bacon 100% fat with mustard on it, pickle relish paint and a beer.

The beer contains of dirt from our shoe, the stickiest peanut butter you ever tasted, so sticky it glues your mouth shut and melted mud mixed in with melted metal (that rhymes). That's our special.

Dinner

A hamburger contains of a wrench, a screwdriver, metal from a cavity and a lit lightbulb.
Bun contains of 1% starch, 99% electricity.
Cornbeef contains of 100% starch topped with shaving cream.

I like most restaurants. When most restaurants give you a rabbit's foot for good luck--we give you a human foot for good luck, but we mix it with the food.

More Dinner

Tack tack sandwich contains of salami which is 1% salami, 12% metal and the rest of the % isn't there.
A bun instead of mustard and relish we give you a tack.

Attack Sandwich is a jolly delicious sandwich. Mustard, snarkle snot and the dolly of your choice. It is such a jolly delight to see the monster fight. It is a jolly delight because a huge monster, a gorilla or lion of your choice, pops out and eats you.

Spaghetti 100% hair, the sauce is 100% mustard. The magic of how well we cook is a demon's secret. Most witches who are making a brew put in one rabbits hair, but we put in a whole head of human hair so you have hair popping up in your sandwiches and meals.

Desserts

One thing about our desserts is that you think that is we just try to make it look good it will taste as good as others. Did you know that black paint looks just like whipped cream and that's just what we put on our sundaes. And by the way it isn't Sunday so why don't you try a Thursday, it tastes just the same.

Our cake special for dessert. Since we favour Nixon so much we decided to break out all of his teeth and put one in each of our cake specials. Since the cake is going to break out all of your teeth you may as well have some of Nixon's cavity prone teeth.

Did you know that with our restaurant you need a lot of time for two reasons. For one, you have to wait a long time to get waited on and two, we never let you out--that's why it's so crowded in here.

Our Clear White Special--when you try our painted glass you're going to love it when it makes that terrific crunch. And when you try our chewed up magazine we put in it you're going to think it's so good you're going to turn cross-eyed. With that hair that we put into everything we make, you're going to love it.

When you try our terrific dessert, Broiled Brains in Butter, you're going to love it. It contains of broiled brains in butter.

When you try our Bust Your Braces Dessert you're going to love it. It will bust your braces so you don't ever have to wear them again cause you will have no teeth.

There is 60 more desserts, but I won't mention them all and 20 more delicious dinners, but I won't mention them all and 30 more unappetizers. I'll mention some more desserts, but not more dinners or unappetizers.

This lovely dessert is dietic--get yourself fat with 30 pounds of chicken fat cause if you can eat all of that you'll get fat and that's just what we put in our lovely desserts.

So try our new Nixon menu, you'll turn into a hen--you old slug it to me.

We give you a free gift--a life time supply of unwaxed dental floss.

CHAPTER IV

THE TRAINING FILM AND THE ANIMATION STUDY

Towards the end of the first year of the project, and while the P.S. 3 study was underway, we all became very concerned with the problem of dealing with such unstandardized teaching situations. At great effort we had endeavored to infer (see the prior two chapters) what was happening to the children. What would happen, we asked, if we could more clearly specify how they were being instructed. Then we would really have a better idea of how they responded at different age levels to the same teaching input. We decided to use animation for such a study because younger children often find it more comfortable (they do not need social skills to control their actors), and it more usually takes place in the more controllable, one teacher-one student relationship.

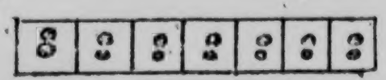
After many group sessions amongst ourselves and much consultation with Larson and Hofer lasting over at least six months, we finally arrived at an agreeable "training film." The bulk of this work was done by Sarah Zarem, who acted both as chairperson for the acquisition of this knowledge and as producer of the videotape which was to be used in the experimental study. There follows an account first of the training film and then of the experiment in which we used the film.

The Training Film

The pages that follow are split in two to show on the left side the information appearing on the videotape for the children to observe and on the right side the contents of the words spoken by the voice over.

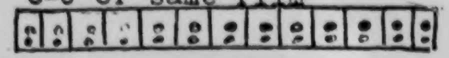
ANIMATION TRAINING FILM
February 1976

by Sarah Zarem

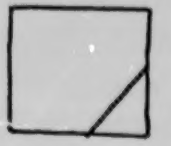
1	HOW TO MAKE AN ANIMATED FILM	A placard with voice-over
2	M-L shot of girl working on animation. See her operate the camer and see the work table, etc.	Here's a girl working on an animation. We're going to show you how to make one, too.
3	Few second of animation with same type toys 	But first, let's see what an animation looks like

4

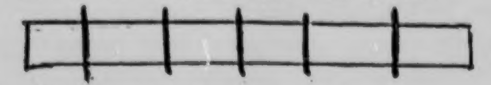
a. C-U of same film



b. C-U of flip board



c. & d. C-U of film divided



e. Film running

a. Animations are actually a series of still pictures, one following the other. The movement that you see before is the result of seeing these still pictures so quickly, that they seem to move.

b. As you can see here (flip board), we have one still picture after another. But as we flip these pages very quickly, we see the ____ move.

c. These pictures move so quickly that during every second, twenty-four still shots go by. Let's go back to the film itself and see what's happening.

d. The heavy white lines dividng the film show groups of 24 still pictures. As you can see, we have five groups. When we show the film, it will run for five seconds and...

e. Look like this--

5

M--M-L shot of camera on tripod

What goes into making this kind of film? Well, first of all, there's the camera.

6

C-U of camera with pointer at various parts

Let's take a closer look at it. These are it's basic parts.
Viewfinder
Focusing ring
Cable release

7

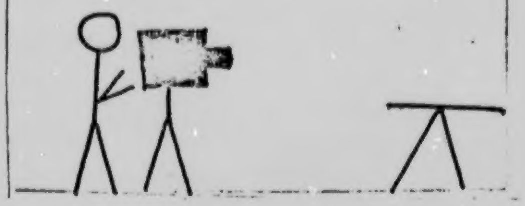
a. M--C-U of filmer looking through camera (straight on) and tilting it (see work table too with object on it)

b. Subjective shot of filmer looking through camera with improper tilt blocking out part of scene to proper tilt...

a. To start, you look through the camera's viewfinder, tilting the camera into position so that you can see all of the scene.

8

M--C-U of filmer focuing



Then, we fix the lens by turning this knob(ring) so that the camera is in focus.

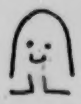
SPLIT SCREEN

9

a. Object out of focus to getting focused (3 stages)

b. Cut-in to filmer's hand (C-U) on focus ring manipulating it

c. Back to subjective shot of object getting focused (2 final stages)

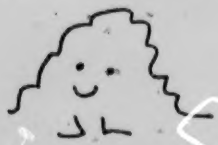


(Start out of focus)...
When the camera's focused, your picture looks like this--very clear and very sharp.

SPLIT SCREEN

10

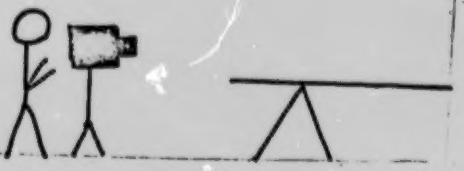
Gradually to C-U of poorly focused object



Not like this--all fuzzy and unclear

11

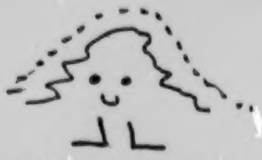
M-L shot of camera on tripod and table taken straight on.



As you can see, the camera always rests on its special stand and is pointed toward an area called the work table.

12

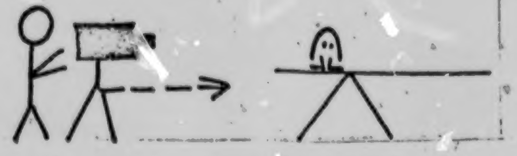
Unsteady camera of an object taken at M--C-U.



The stand keeps the camera nice and steady so that the pictures don't look wobbly--like this

13

M-L shot of filmer and work table with pan to table with a character on it.

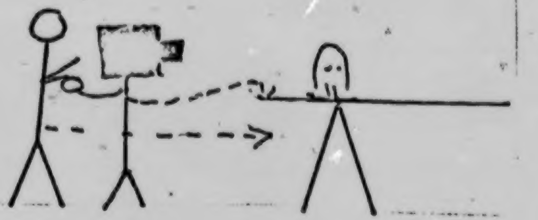


And it's on this work table that you place your characters.

But how can we get this character to move?

14

Go from M-L of previous shot to M/M-CU of filmer handling button near camera, and then taking it to work table. (Pan)



Remember how we told you that animated films are a series of still pictures? Well, each of those pictures is made by pressing this cable release. The release can be pressed at the camera itself, or carried over to the work table and pressed there. (This runs into the next shot. Have filmer carry it over as he goes to manipulate object on work table)

15

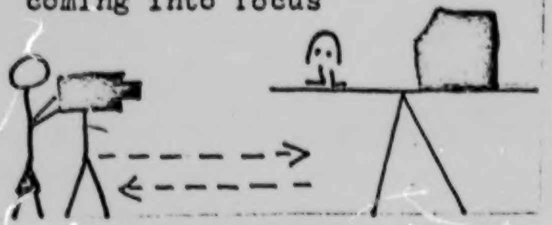
a. Filmer manipulates object on table (M-L shot)

b. Pan back to filmer tilting camera (M-L)

c. Subjective view of proper tilt

d. C-U of filmer manipulating the focus ...SPLIT SCREEN

e. Subjective view of camera coming into focus

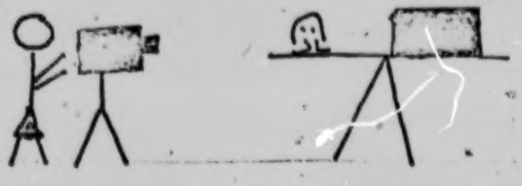


So...We place the object we would like to photograph on the work table. Carefully, we tilt the camera so that we see all of the object. And then we focus the camera--Like this...

16

M-L of filmer shooting character with C-U to his finger on button. RT=RT

(See filmer press 24 times)



And then...
To show our character just standing there, we must press that camera button 24 times for each second we want to show him standing there.
The longer we want to show stillness, the more presses of the cable release we must make.
Therefore, for one second of stillness, we have to press that button 24 times; for two seconds 48 times; and for three seconds 72 times. Let's start with one second of stillness.

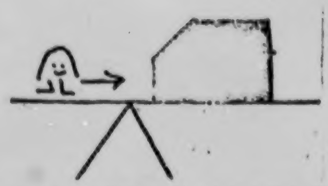
17

a. M-L of filmer and work table

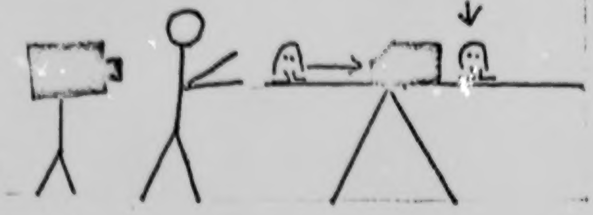
b. Filmer walks over to character/setting (pan) and moves character

c. Filmer pushes cable release.
RT=RT

(Character and house with character moving toward house)



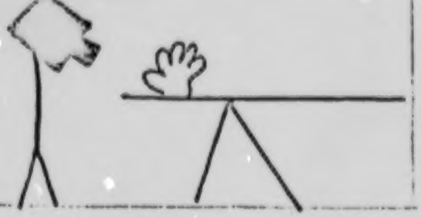
When we want to see the character change position, we very carefully move the character slightly and press down on the button 4 times.

18	a. M-L of filmer going to table and moving object b. C-U of cable release and filmer's hand using it c. M shot of filmer manipulating character toward house, then behind it, then reappearing. (RT=RT) (About 5 seconds film time, i.e. 30 grps. of 4 clicks) 	And to see our character move, a bit more, we just repeat the same procedure. As before, we click four times after every change of position. See how it's done.
19	Piece of animated film using the character and house of above shot. Appear-disappear-reapper.	When we actually see the film--that is, when we're all finished, the movements look like this. For all that work see how far he went...
20	Recap shot: See filmer as in shot # moving the character, but have the character advance a bit more. 	So all that movement is the result of changing the character's position a little bit each time and pressing the special cable release four times after each change.

21

a. M--C-U of filmer moving character and pressing release clearly in line with camera's eye

b. Subjective shots (C-Us) of hand in scene



While you press the cable or body release, be sure your hand/isn't in line with the camera.
See what happens if you're not careful!

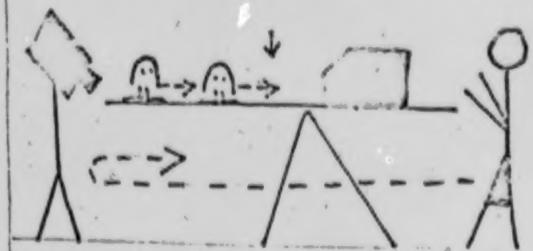
22

a. M--L of filmer (enter right) adding a character to table & checking framing of camera

b. M or MCU of filmer at angle (left side table)

c. Two seconds of still character

d. Three, four and five of same



Characters move toward house

And we can work with more than just one character at a time. We can have one person following another.

a. To do this, we place another character on the work table in line with the camera. For every second we want to show both characters stillness we press the cable release 24 times-

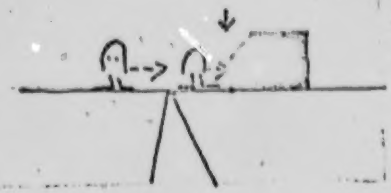
b. This time let's have 2 seconds of stillness. That means 48 presses, right?

c. And see, for all those presses, the stillness looks like this...

d. 3 seconds of stillness would look like this--four like this-- and 5 like this--

23

M shot of filmer releasing cable, changing each character's position slightly (toward house) and then pressing release



Then to show movement, we stop pressing the button and change the characters' position slightly...And then press the release 4 more times.

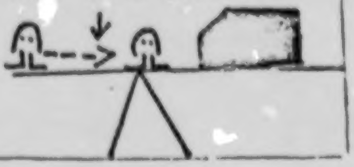
24

Repeat above shot with characters advancing. See filmer make 5 changes of position.

And then we repeat the same steps. Take your hand off the cable release. Change the characters' positions again very slightly and press the cable release four times.

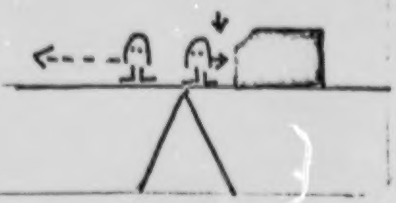
25 Repeat previous shot, with just one character moving (one behind catching up)

Filmer does this 3 times



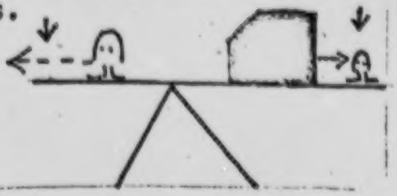
You can move your characters in many different ways. To see them more separately, just follow the same steps, but move only one.

26 Same as above. Filmer moves each character diff. 3 times



Or, make them move in different directions.

27 Same as above. Filmer moves one character behind house, the other in opposite direction. Then former reappears.



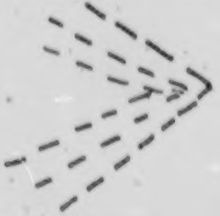
You can even make one character disappear.

...and reappear someplace else. Watch!

28 Recap of above shot--filmer at work moving character. (once), then 1 second still, the two movements.

(Move character on right)

But the general rule is always the same. For every second of stillness you want, you must press the release 24 times. Every time you want to show movement, you must change your characters' position and press the release 4 times after each position change.

29	Subjective shots of an object moving closer up 	Now let's look at a special technique you can use for making your characters appear closer up without moving the camera.
30		Let's see how it's done.
	a. M-CU of filmer at camera	
	a.1 Subjective shot of object at particular distance	a.1 First your character appears at this distance
	b. C-U of filmer turning ring	b. But when you turn this ring on the camera
	b.1 Subjective shot of object closer-up	b.1 Look--you've moved in closer to the object
	c. C-U of hand turning ring	c. Turn the ring a bit more
	c.1 Subjective shot of object still closer	c.1 And you move a little closer
	d. C-U filmer's hand turing ring	d. One more turn
	d.1 Subjective shot closer still	d.1 And you move still nearer
	(Be sure that view sees filmer click the button starting at b.1 through d.1)  	
31		And we can go in the reverse direction too. To make the character appear farther away, just turn the ring in the opposite direction.
	a. M--C-U of filmer at camera	
	a.1 Subjective shot (d.1 repeat)	a.1 So from this close distance
	b. C-U of filmer turning ring	b. Turn the ring
	b.1 Subjective shot	b.1 And see the character move further out
	c. C-U filmer's hand on ring	c. We turn the ring once more
	c.1 Subjective shot	c.1 And move out still more
	d. C-U filmer's hand	d. Again...
	d.1 Subjective shot	d.1 And the character seems even further away.
	(include clicks) 	

32 Repeat of previous two shots

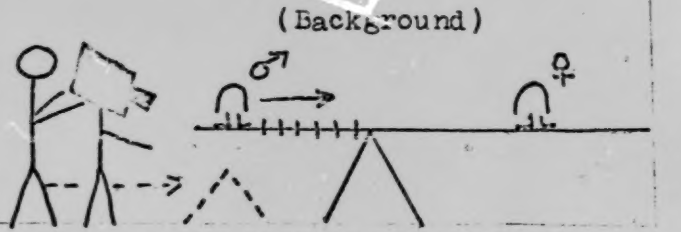
# 30

# 31

Let's see the whole process one more time.
We move in...

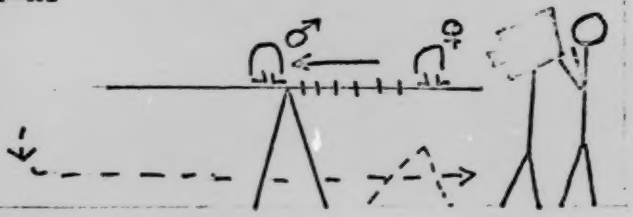
And out...

33 M-L of filmer at camera viewing/adjusting then pan right as she goes to table and shoots pictures. Zoom in to M-shot and show filmer manipulating character. One second still; one second movement. RT=RT



Another special thing we can do is change the position of the camera. We can start from one side of the work table, take some pictures of our characters and then...

34 Zoom out to M-L, pan left back to camera. Filmer picks up camera and goes to opposite end of table. Zoom in to M-shot and show filmer manipulating other character. One second still; one second movement. RT=RT



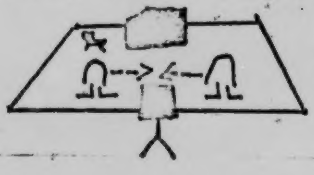
Pick up the camera and stand, place it someplace else (180°) and take more pictures.

35
- a. (Delay.) Actual film clip with reverse angle shots of above two scenes
- b. Still clip of girl seeing boy
- c. Still clip of boy seeing girl
- d. Recap of a. (actual clip)

Let's see that as the audience would see it. Instead of seeing a boy and girl moving toward each other, we see that the girl sees while the boy moves toward her and what the boy sees and the girl moves towards him.

Let's watch that one more time.

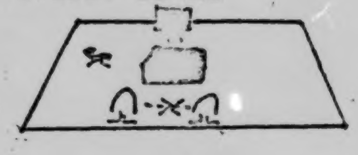
36 M-L of filmer viewing/adjusting at table's front to M shot (change angle slightly) of filmer manipulating character. One sec. still; one movement. RT=RT



Chactrs. together towards each other

Another thing we can do is to start with the camera in front of the work table. We take our pictures, just as before, and then...

37 Zoom out to M-L, pan back to camera. Filmer picks up camera and goes to table's back. Adjusts camera. Zoom in to M-shot and show filmer manipulating characters. One second movement; one second still. RT=RT



Chtrs. toward each other

Move the camera to the back of the work table (180°). Like this... and take more pictures.

38

a. (Delay) Actual film clip with reverse angle shots of above two scenes

b. Still clip of both characters taken from front

c. Still clip of both characters taken from back

d. Recap of a. (actual clip)

Can you see the difference? Let's look at it as the audience would see it.

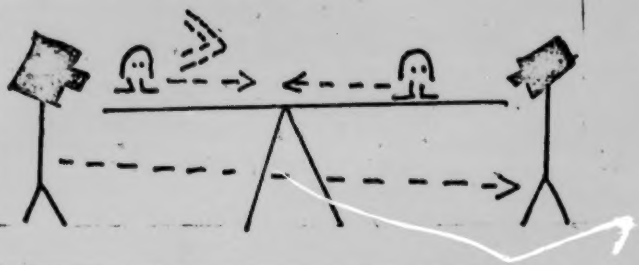
Instead of just viewing our boy and girl from one side, we now see them from both sides. And instead of seeing the house and dog from the front, we see them from the back, too.

Let's watch that one more time.

(optional/negotiable)

39

M shot of filmer at camera to pan of filmer at table moving characters 6 times.
Reverse pan of filmer to camera doing C-U shots 3 times
M-L of filmer changing camera position (180 degrees), reframe, etc.
M shot of filmer at table moving characters 6 times.



And, of course, we can combine all of these techniques.
Look.
We can start with two characters and this camera in this position. (right side table).
Then we can move both characters toward each other.
And then move closer to one character (to flowers boy is holding)
Change the position of the camera again (180 degrees)
And have our characters continue their walk.

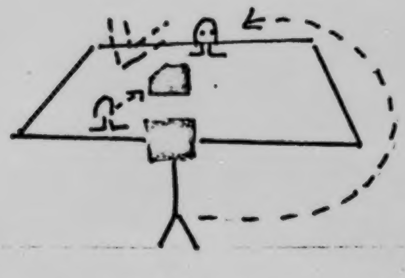
40

Actual clip of film

Let's see what that would look like all finished.

41

M shot of filmer at camera framing in front table, then setting characters and shooting 2 sec. stillness
M-L shot and pan as filmer moves camera, re-sets it & takes pictures



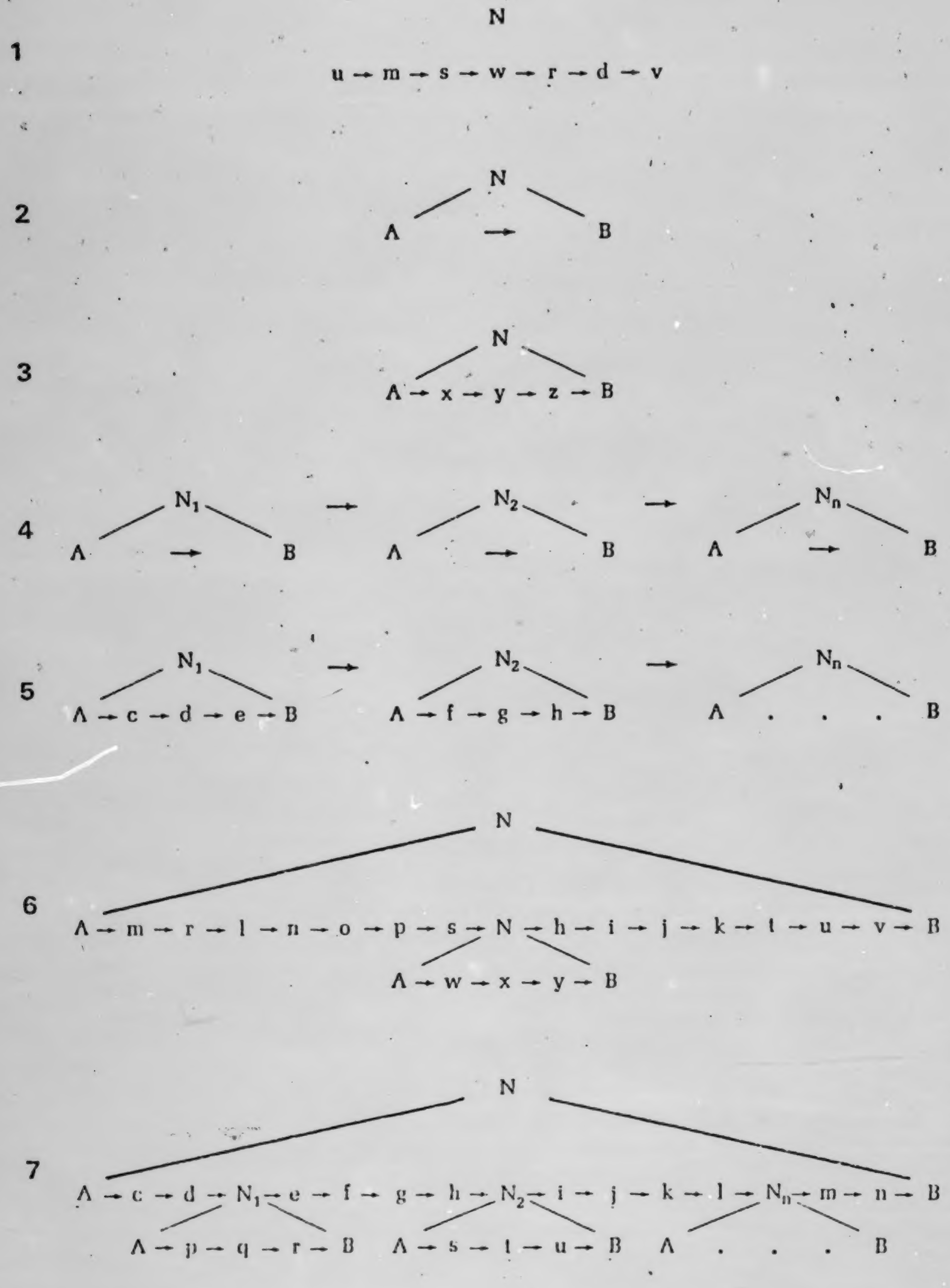
Or, we can start with the camera here (table front) and show two seconds of stillness--
Move the camera to here (table back) and show one second of stillness--
Make one character appear closer--
And then makes one character walk towards another.

42

Actual film clip

Let's see what that would look like all finished.

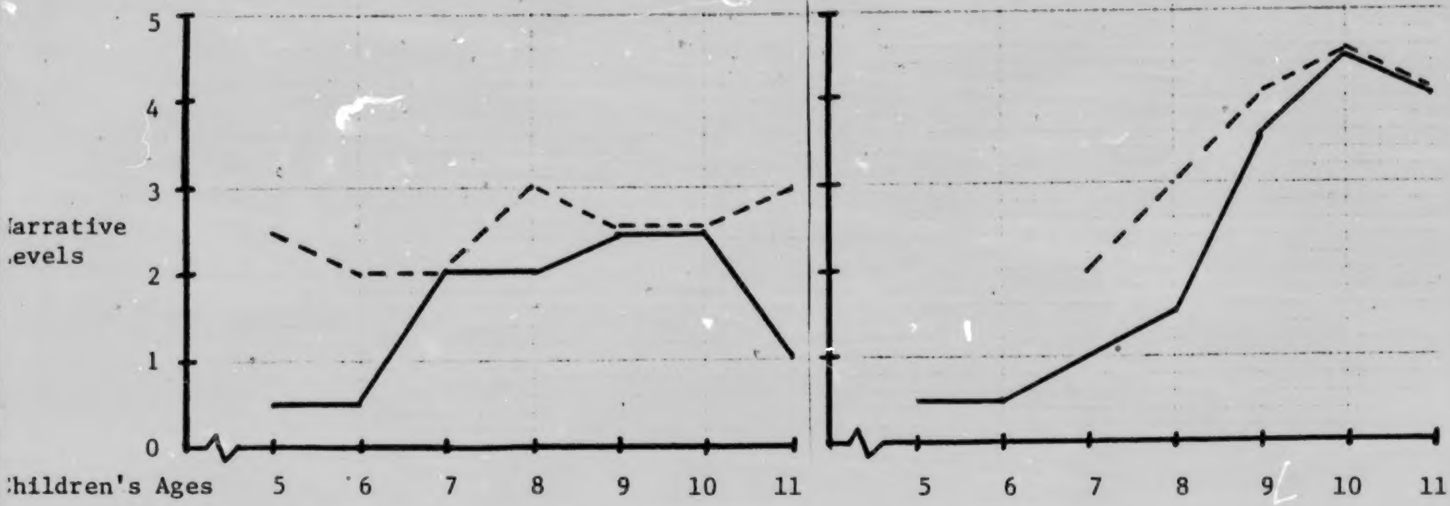
Figure 4. The Narrative Levels (Botvin).


1
N
u → m → s → w → r → d → v
2
N
A → B
3
N
A → x → y → z → B
4
N1 → N2 → Nn
A → B A → B A → B
5
N1 → N2 → Nn
A → c → d → e → B A → f → g → h → B A . . . B
6
N
A → m → r → l → n → o → p → s → N → h → i → j → k → t → u → v → B
A → w → x → y → B
7
N
A → c → d → N1 → e → f → g → h → N2 → i → j → k → l → Nn → m → n → B
A → p → q → r → B A → s → t → u → B A . . . B

age five through age eleven and in some cases, as in Figure 5(b), the youngest of these were not even capable of, or willing to, tell a story for the purpose of making an animation. The analysis was done by Gilbert Botvin.*

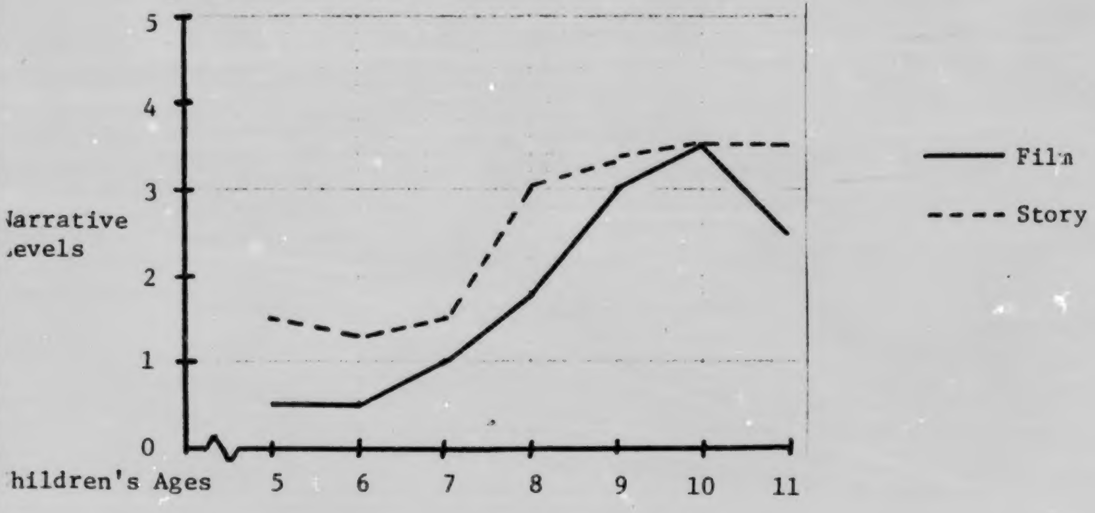
Figure 5.

Narrative Levels in Story and Film


(a) Males (N=14)

(b) Females (N=14)

(c) Mean Story and Film Levels



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* Reliabilities are reported in the original article.

The explanation of the Levels 1-7 of Figure 4, which provide the scoring system for Figure 5, are as follows:

Level 1. Narratives at this level lack coherence and structural unity. Prior to this, children's narratives are the result of juxtaposing several proper nouns with only the implication of action. However, while narratives at this level do contain a series of events, they are essentially the result of an associative concatenation of events in a fragmented and unorganized fashion. Example: The little duck went swimming (Initiation Situation). Then the crab came (Arrival). A lobster came (Arrival). And a popsicle was playing by itself (Unclear).

Level 2. Narratives at this level are short but structurally symmetrical. They are characterized by the presence of one nuclear dyad. Although these narratives may have action elements either before or after the nuclear dyad, no elements occur between the initial and final terms of the dyad. Example: An astronaut went into space (Departure). He was attacked by a monster (Villainy). The astronaut got in his spaceship and flew away (Villainy Nullified).

Level 3. This level is characterized by the internal expansion of the narrative through the use of intermediate action elements, that is, secondary plot units. Narratives at this level are differentiated from those of Level 1 by the elaboration of action through interposing elements between the initial and final terms of the nuclear dyad. Example: Once there was a little girl. She went walking in the woods (Departure) and soon it was dark. It was so dark that she couldn't find her way back home (Lack). She cried and cried (Lack Made Known). An owl heard her and asked if she was lost (Interrogation). She said yes (Acquisition of Information). The owl said he would help her find her way home (Alliance). He flew up in the air and looked around (Reconnaissance). After finding out which way to go (Reconnaissance Fulfilled), he said, "Okay, follow me." Then he led the girl out of the woods and showed her the way home (Lack-Liquidated). When she got back home (Return) she was so happy. She gave the friendly owl a kiss and thanked him (Reward) and told her parents she would never go walking in the woods again by herself. The end.

Level 4. These narratives are characterized by the conjunction of two or more action sequences (primitive episodes). That is, these stories are the result of the concatenation of elementary dyadic structures. Moreover, there is the loss of the intervening elements of Level 3 and a regression to Level 2 constructions, while there is an attempt to expand the boundaries of the narrative through repetition. Increases along one dimension result in decreases along another dimension. Example: There was this friendly lion in Asia (Initial Situation), but he was captured (Villainy) and brought to a zoo. Then the lion escaped (Villainy Nullified). He was walking down the road (Initial Situation) and a truck tried to run him over (Villainy), but he managed to get out of the way (Villainy Nullified). He began to get hungry (Lack) so he ate a rabbit (Lack-Liquidated). The end.

Level 5. This level is characterized by the conjunction and coordination of elementary dyadic structures as well as the internal expansion of intermediate action elements. Narratives at this level, therefore, are composed of two or more well-developed episodes. Example: Once Batman and Robin were in a haunted house (Initial Situation). Robin fell through a trap door in the floor and landed in an underground river (Lack). Robin pressed his magic watch to signal Batman for help (Lack Made Known). Batman heard the signal and looked all over the house for Robin

(Search). Then he saw the trap door (Find). He lowered a rope from his Bat belt and pulled Robin out of the water (Lack-Liquidated). Then they heard a scream (Deception). They thought it was a girl, but it was Spiderman (Deception Fulfilled). They looked around and the screams seemed to come from the attic. Batman and Robin ran up to the attic to save the girl but Spiderman was hiding behind the door waiting for them (Threatening Situation). When they came in Spiderman threw an extra strong Spider net over them (Villainy). They tried to get out but they couldn't (Attempted Escape). "I've got you now," he said. "I'm going to kill you, and Wonderwoman and I are going to take your Batmobile and live in your Bat Cave" (Threat). But Batman told him that he had a special key for the Batmobile and Bat Cave (Deception). And when Spiderman came over to get the key (Deception Fulfilled) Batman hit him right in the face and knocked him down (Counterattack). Then Batman and Robin got out of the net and beat up Spiderman (Struggle, Victory) and put him in jail (Villainy Nullified) so he wouldn't bother them anymore. The end.

Level 6. This level is characterized by the single embedding of one dyadic structure within another, that is, the subordination and hierarchical organization of nuclear dyads. The main action of the narrative is interrupted by a subsequence of action. In other words, this is the beginning of the use of subplots. Example: A man named Mr. Dirt lived in the country all by himself and owns a farm (Initial Situation). One calf got away and went into the woods and headed for the mountains (Lack). So Mr. Dirt went up the mountain after the calf (Departure, Search). On the way a bear came after Mr. Dirt (Villainy). He ran up a tree (Escape) and the bear climbed up the tree after him (Pursuit). Mr. Dirt threw his ax at the bear (Counterattack) and hit the bear in the head. Blood poured out of his head (Wound) and the bear fell down and died (Villainy Nullified). A few minutes later the calf ran over to Mr. Dirt (Find) and they went back to the farm (Return, Lack-Liquidated).

Level 7. This level is similar to Level 6, but is characterized by the multiple embedding of dyadic structures. The main action sequence is interrupted by two or more subsequences. There is the subordination of plots within plots. Example: Once upon a time there was a little fish named Josh (Initial Situation) and he was going to a fish fair (Departure) and there were fishers over the fish fair (Threatening Situation) and the fisherman caught everyone including Josh (Villainy). Then they put all the fish in the fishers' hole (Lack) and there were sharks and sting rays (Threatening Situation) and a sting ray was going after Josh (Villainy) and then a shark chased the sting ray because he wanted to eat the sting ray (Fortuitous Occurrence). So the sting ray stopped chasing Josh (Villainy Nullified) and ran away from the shark. So the shark and the sting ray got into a big fight. But then another shark gobbled up his mother and father and sister (Fortuitous Occurrence). And then he left (Villainy Nullified). And then the boat was sailing and sailing and sailing. There was a big storm that night. And it hit against the rocks and made a big hole in the fishes' hole (Fortuitous Occurrence) and Josh escaped (Lack-Liquidated) and went back to his house (Return) and he stayed there until he was big.

In Figure 5 we show both the level of the story which was told before the film was made and the level of the story in the film itself using the Botvin seven categories. For this group of children, ages 5 to 11 years, the highest level was approximately category 4, in which there are a series of dyadic plot episodes. It is noticeable that the level of the story within the film itself is consistently below the level of the story told before the film was made. The material in Chapter III would lead us to believe, moreover, that the level of the story told for the purposes of film making was itself already a step or two down from the complexity level of which the child was inherently capable. We are lead to suppose, therefore, at least a two step regression as follows:

Level of freely told story	0
Level of story told in preparation for film making	-1
Level of story yielded within the film actually made	-2

In a separate study of story taking, Peterson (1976) has also found that the level of storytelling can depend upon the constraints imposed by the instructions. He compared storytelling from the same children under three randomly rotated conditions: (a) a freely told story, (b) a story told to a picture, and (c) a story told to an ink blot. He found that children told stories of higher complexity in the freer condition, and were successively less complex with pictures and with inkblots (Peterson, 1977). He argued that children were more familiar with the TAT pictures he used than with the inkblots (Holtzman) and that was the reason for their poorer performance with the latter. A number of major theorists have argued for some time that conditions of freedom are necessary for the higher levels of creative performance and have contended that it is only under such conditions that higher level performances are forthcoming (Wallach, 1970). In short, each time we impose something more difficult to do, such as telling a story in order to make up a film or telling a story through a film, then the child lowers his level of response as he has to pay attention to other things than the story itself.

After the age of eleven years, however (not shown here), we noticed that a change took place. Twelve out of sixteen of the 12-15 year old children told stories that were scenarios or a shot list and merely sketched out the potential action, so that the stories in the film medium itself were more, not less, complex than the sketches or scenarios with which the film makers began. It is as if by twelve or thirteen years the children had sufficient flexibility with storytelling that they could change its form to fit the need rather than be tied down to one narrative technique they could only condense. Perhaps in developmental terms this is to say that it is not until there is abstract symbolic mastery of a medium that its functioning is sufficiently versatile not to be regressively affected by higher level adaptive demands. This is an extremely important point for educators because it is not always realized that demands of a new technique will usually lower the competence level of already established techniques. As Werner and Kaplan put it: "a novel emerging function becomes actualized at first through the use of means articulated and structured in the service of genetically earlier ends" (1962; 66). We should not be surprised therefore if the content of first films is relatively "childish" even for the children who make them. We remember that Rose in her final interview expressed just this feeling about her own first film, that it was "babyish." There is considerable anecdotal evidence that on viewing first films, children are often overwhelmingly depressed. The realized film is not what they had in mind at all. But still, we now have this illusive clue that when formal operations have been achieved, that is, when children do not just tell stories but can manipulate the genre (by making up scenarios, sketches, satires, etc.), then this genetic recursiveness of which we have been speaking need not occur.

Turning now to films themselves and putting aside the question of narrative levels, we can examine them in terms of the narrative elements they contain. For this analysis Zarum made use of the levels delineated by Todorov in Leondar (1977). His five elements are:

1. A state of equilibrium
2. Disruption of that equilibrium

3. Recognition of that disruption

4. A countervailing force or action to restore the equilibrium

5. Actual restatement of the equilibrium or resolution.

These elements are very similar to the series of Maranda stages which we had proposed in our own earlier work (Sutton-Smith et al, 1975), and as such supply a certain external corroboration to both systems. Zarum has provided the needed translation of these levels into the kinds of operations through which they would be exemplified in the children's films (the "Todorov Narrative Elements" outlined below).

Inductively, however, we found that the third Todorov element (recognition), while clearly relevant to adult films, is not generally relevant to those of children in which reaction follows action without intervening conscious or Hamlet-like deliberation. In addition, some children's stories do not contain conflict and have to be assessed in some simpler way. The categories of "recognizeable purpose," "theme present" and "character differentiation" were therefore added. These various elements follow:

A. Todorov Narrative Elements *

1. Equilibrium -- state of film narrative where the action portrayed is peaceful. It may be nondescript in nature, where the sense of the on-going action is indecipherable (e.g. many characters grouped together with minimal movement) or may be specific in nature (e.g. two characters walking toward some definite place).

2. Disequilibrium -- introduction or beginning of a narrative event disrupting the quilibrium (e.g. spider's arrival to a peaceful farm setting). It signals a perceptible change in the state of affairs previously established.

Recognition of disequilibrium -- reaction of the character(s) to the disruption of the equilibrium (e.g. spider arrives, animals back away), which signals a realization or alteration in the general state of affairs.

3. Countervailing force or action -- introduction and/or use of character(s) to restore the equilibrium; an attempt to deal with the disequilibrium. May be successful or non-successful (e.g. army introduced to destroy spider, but they

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* As all of the children's film making was videotaped it was not difficult for Sarah Zarem and Dan Mahoney to reach a consensus on the scoring across categories in this and subsequent chapters.

4. Resolve -- restoration of the equilibrium or end of the story so that a sense of completion is rendered to the film narrative.

B. Additional Elements

1. Purposive action -- series of character(s) actions which appear purposeful or goal-directed (e.g. gymnast practices, a girl finds two birds). This category replaces those of disequilibrium, recognition of disequilibrium and countervailing force because there is no apparent disruption nor consequent need to rectify it.

2. Theme -- General sense that the film is "about something" apart from the number and kind of particular narrative elements which may or may not have been elaborated.

3. Filmic focus or Main character/Main character alliance -- Presence of a central focus of action in the film so that who the story concerns is specified. The who can be a single character or a group of characters.

When the children's films were scored for the presence or absence of each of the elements outlined above the results were as in Table 1. The table shows changes across the four grouped age levels. The groupings were made 5-6, 7-8, 9-11 and 12-15 years to reflect the empirical shifts in the data. Half the children at each age level were boys and half girls. The table shows how many children in each age group showed each category in their film.

Table 1

Developmental Shifts in the Use of Narrative Elements in Animation Films

		A. Conflict Categories				B. Non-Conflict Categories		
Age	N	1 Equilib	2 Diseq	3 Counter	4 Resolve	1 Purpose	2 Theme	3 Character
5- 6	8	7	1	0	0	0	1	1
7- 8	8	7	4	2	3	0	3	7
9-11	12	12	8	5	8	2	10	12
12-15	16	14	14	10	12	2	15	15

The major statistically significant shifts occur between the five to eight year olds (pooled together) and the nine and eleven year olds in the categories of disequilibrium, countervalence, resolution and character differentiation. There is the suggestion also of changes even within the five to eight year old group between the five and six, and the seven and eight year olds with character differentiation also obtaining significance. Again within the older group there are perceptible if non-significant shifts in most of the same categories between the nine to eleven year olds and the twelve to fifteen year olds.

As Table 1 indicates narrative competency as defined by the use of the seven specific narrative element variables increased with age. Films from the youngest children displayed only equilibrium or disequilibrium and it seemed that the latter element constituted the minimal requirement for the ascription of thematic content. With age more and more of the narrative elements were used, the biggest shift occurring between the seven to eight and the nine to eleven year olds when elements pertaining to the middle and end of the story were added (i.e., equilibrium, countervaling force/purposive action and resolve). There is, in fact, a steady increase with age in number of narrative elements employed per film. Seven to eight year olds appeared to be transitional in the shift between poor to good narrative representation.

The narrative characteristics for each age level in turn were as follows:

1. The 5-6 Year Olds: Lack of Narrative Control.

Even when an attempt was made to translate a story in only one case did a central character or main character alliance emerge, so that generally we were unable to discern whom the filmic story was about. Often large numbers of characters were grouped together in an unordered fashion, the relationship(s) among them never being specified through either spatial placement or movement patterns, as illustrated in Figure 6, the story of a six year old female. The closest thing we have to a central character in most of these films is, ironically, the camera itself. Children began with a heterogeneous collection of objects and went about regrouping

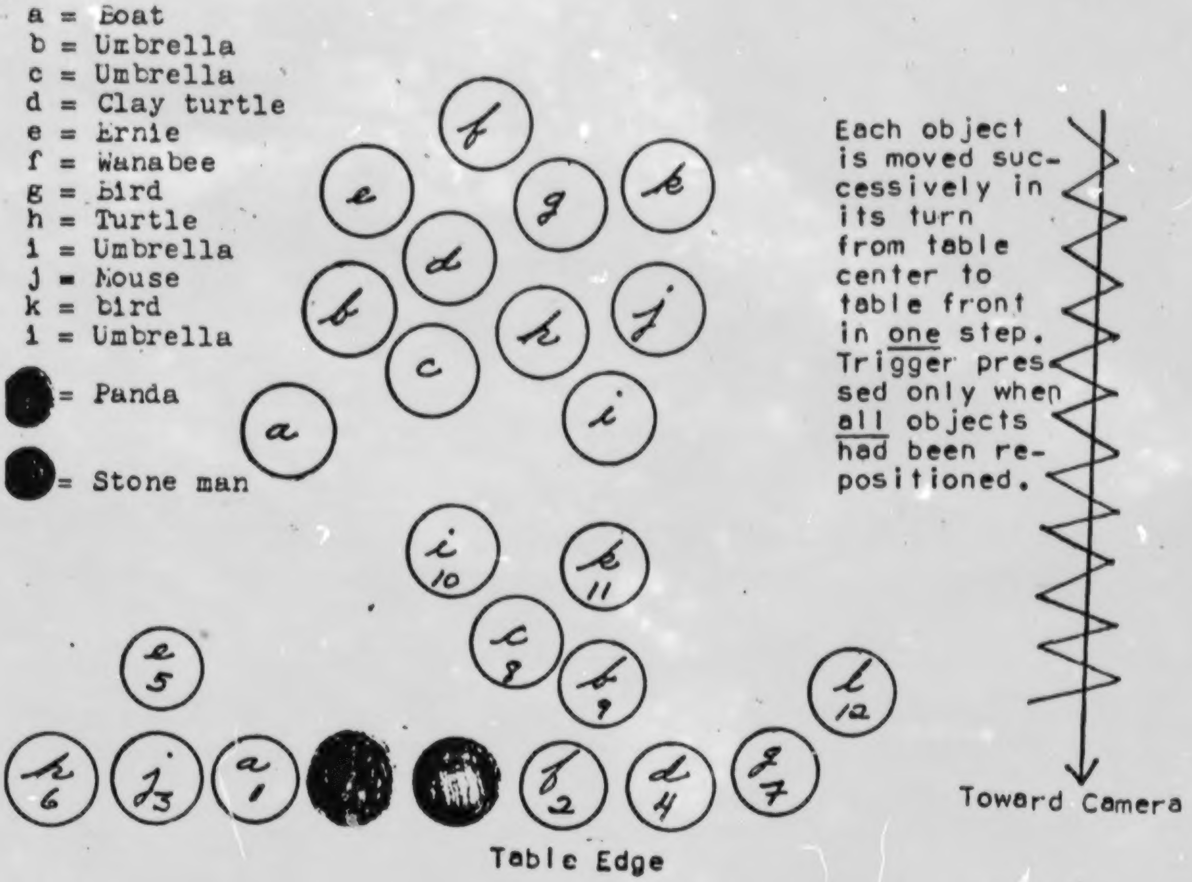
Figure 6.

Story and Film Translation of a Six Year Old Female

Story.

Out there was a big man that liked a bear and the bear liked the old lady that liked to go to the park and the grey man didn't like the old lady that go to the park and the old man liked the boat that takes him on the bear and her . . . and one of the turtles said to the old man, "why don't you like that lady that goes to the park" and then the old lady went on the boat that carries her to Coney Island . . . and then the bird and the umbrella had to cover the boat because it was raining. Lightning struck the umbrella and there was a crash and the boat bumped into the turtle . . . and then Ernie said "you crazy boat. I'm going to beat you." . . .

Film Translation.


a = Boat
b = Umbrella
c = Umbrella
d = Clay turtle
e = Ernie
f = Wanabee
g = Bird
h = Turtle
i = Umbrella
j = Mouse
k = bird
l = Umbrella
● = Panda
● = Stone man

Each object is moved successively in its turn from table center to table front in one step. Trigger pressed only when all objects had been repositioned.

them, but these position changes were directed towards the camera itself (Figure 6). The camera, therefore, took on a status analogous to the toys on the table and may--since all object manipulations are (unidirectionally) coordinated to it--be conceptualized as the "central character" of an otherwise undifferentiated colligation. By and large, however, narrative concerns were irrelevant; the children who did relate stories prior to their filming either abandoned them entirely or were unable to effect their translation. What eventually did make its way from object manipulation to celluloid could not be construed as bona fide narrative expression.

2. The 7-8 Year Olds: Dominance of Narrative.

Children between seven and eight understood that the camera was a recording agent and, correspondingly, established a strict isomorphism between object manipulation and filmic registration. At the same time the importance of the story as a filmic backbone surfaced, such that a crucial concern was with the establishment of a translation between narrative and visual modes. One might say that the problem of creating a one-to-one correspondence between object movement and filmic recording was transposed to the problem of creating a correspondence between story events and filmic representation, Such change implies that a more central problem has been solved, namely, the representation of flux. Where the youngest children could not represent movement at all, or did so poorly, these children were generally able to segment object movement so as to produce the illusion of action and events.

Concomitant with the emergence of filmic actions and events was the filmic portrayal of a main character or group. From a previously undifferentiated ground, we see character foci emerge and the relationship between figure and ground specified. There is, moreover, filmic object constancy of character with the central figure(s) visible from the film's beginning to its end. We no longer follow the fragmentary, transient movements of idiosyncratic objects, but constant coordinated paths of movement and the action of centralized figures.

The filmic system, however, plays a secondary role to the narrative. That is, the narrative mode dominates the filmic and the stories themselves are structurally more complex than the films, with children concentrating on simply recording as much of their stories as possible on film. Narrative and filmic concerns exist in an irreversible one-way relationship to each other, the crucial factor being the general inflexibility between the systems and the need to subsume one system to the other. There was one exception to the narrative realm dominating the filmic. One S (male, 8 years) experimented with camera technique, capitalizing what the camera as recorder could do rather than on what it could say. Story concerns were irrelevant to him: "I don't like stories in my films because I don't need them . . . because you couldn't make any sound." When questioned again as to what happened in his film, he replied: "I don't know what's happening in the story, but I am just making a funny film." Because the filmic mode is the newer and more difficult one we would expect children to utilize the skills and strategies they are most familiar with, narrative conventions--genetic recursiveness again.

While it is apparent when viewing these films that they are about "something," the nature of that something is often obscured by too literal a translation of narrative technique to film, or by an incomplete understanding of how to appropriately effect such translation. The distinctive qualities of the filmic medium which set it apart from strictly narrative conventions are not totally comprehended and, consequently, the more familiar narrative strategies perserverate. For example, because film follows the story model, characters and events were sometimes introduced at once or en masse, without temporal preparation. Also because the story mode predominated, stillness was used primarily as a dialogue marker and not as an establishing shot to orient the audience as to narrative locale. When asked why they employed stillness in their films children responded with answers such as "because they're talking," "because they're making plans," "because they're thinking." In most cases the stillness followed from dialogue sequences in the narrative and was introduced in the film according to its temporal order in the narrative structure. As these reasons indicate, stillness served to illustrate various character states, although the children did not always distinguish between them. A group of characters could be seen together in one frame "talking" and yet be "thinking" in another frame without any visual distinction made between conditions.

These examples point to a general conceptual difficulty underlying the translations of narrative to film which is the confusion between narrative and filmic spatio-temporal relationships. Where, for example, in a story one can say, "A went for a walk, came home, slept and left the next morning . . . ",and the reader can grasp the temporal relationships inherent in the character's actions, in film the same sequence cannot be rendered so easily. Passage of time must be developed for the viewer in appropriate cinematic terms. Children have difficulty understanding this; thus, a character going to sleep is portrayed by inverting the object and pressing the trigger 24 times; his awakening on a new day is shown by reversing the supine position and clicking about four times (i.e., one second of time signified the duration of evening!). For the viewer, this sudden jump from up/down/up is bewildering and does not adequately convey temporal duration filmically. Estimating the running time of their films presented similar difficulties. The children could not differentiate properly between real and reel (psychological time) and equated the latter with the former. Films were expected to last anywhere between half an hour to an hour!

Analogously, a confounding of narrative and filmic space could occur if the child's story included more than one spatial differentiation. Verbally it is quite comprehensible to say, "A left home, went to the hospital and then returned home." We know that home and hospital comprise two clearly differentiated spaces, either contiguously or non-contiguously related. However, when this became translated to film, as in the case of one eight year old boy, a cut of the word "hospital" was hung on the house and the same space used to denote both home and hospital without the characters themselves ever leaving (visually) that primary home space.

3. The Pre-adolescents, 9-11 Year Olds: Film as Representation.

The major shift which occurred within this age period might be said to be a change from film-taking to film-making. Intersection between narrative and filmic realms increased to the point where the filmic systems began to be used in the serivce of the narrative, not just the other way about. The camera did more than simply mirror events; it began to represent those events in its own terms. Thus, where 7-8 year olds were concerned with a correspondence between narrative action and filmic registration, 9-11 year olds were concerned with a correspondence between narrative action and filmic expression. Isomorphism between object movement and camera presses, which was de rigeur for the younger children, was now replaced by a greater concern for isomorphism between content and technique.

Narrative concerns were themselves more flexible. Some children told fairly elaborate stories, others gave story outlines. Thus, while the narrative still served to guide the film, it did not necessarily circumscribe it. Seven to eight year olds rarely went outside their stories: new characters were not added, additional scenery was not used, markers were sporadically employed and plot expansion did not occur. For these older children, however, the process of filming their stories led to a recognition that certain accessories to the strict narrative would be necessary in order to filmically convey the narrative action. As a comparison of their films with those of the 7-8 year olds indicates (Table 1), not only do more of the narrative elements or divisions appear in these later films, but their overall expression is better controlled. Such narrative expansion, in turn, implies both a growing concern for veridicality of representation and an awakening cognizance of the spectator role.

In many ways veridicality and a concern with the spectator are parallel and can be conceived as the tools enabling the achievement of filmic representation to occur. When a narrative, for example, talks about a "house falling down," or a "burning building" children at this age realize that: (a) the action upon the agent (building) must be specified filmically--it must look "real" on film and to an audience--and (b) comprehensibility of action requires duration over time. Like the sleep/awake/sleep strategy found in the 7-8 year olds, a burning house can be represented by showing the house upright, turning it over (for a few clicks) and subsequently reinverting it. Or the action can be presented, as one nine year old boy did for his crumbling house, by destroying the building slowly in a series of discrete steps so that the process of collapse emerges filmically.

It is not surprising that concern for the spectator role began to emerge among the oldest (10-11 year old) children here, as these children are well into "concrete operations." As Piaget (1950) has argued, impersonal cognitive structuring in the logical/physical realm and taking the perspective(s) of others in the social realm are "two complementary perspectives of one and the same whole" (p. 166). Other researchers have found that the ability to account for another's perspective (or multiple perspectives) begins at approximately age 10+. Feffer and Gourevitch (1966) administered a battery of Piagetian tasks and a social role taking test to children between six and eleven. The role taking task instructed the child to tell a story from the viewpoint of different characters, some of whom arrived on the scene later than others. Success required that the child modify his account of the narrative, leaving out or including information so as to allow for the difference in each individual character's perspective. This has its analogue in film making where the child realized that filmic expansion of his narrative is requisite if the film is to properly communicate the story. Results indicated that the greatest degree of balanced decentering in both physical and interpersonal areas occurred at about age ten. Miller et al (1970) found that only children in grade six were able to start thinking recursively, i.e., to be aware that one can think about one thinking about them, which is another skill required in making a film comprehensible to an audience.

And Rubin (1973), similarly, found that egocentrism was a unitary construct cutting across physical and social realms, with older children (fifth and sixth graders) being best able to recognize and assume the perspective of others.

While the recent reevaluation of this Piagetian literature (Gelman, 1978) would suggest that in more naturalistic circumstances very young children can carry out some of the operations which in the above experiments appear confined to the latter elementary years, the relative "artificiality" of the present animation experiment gives it some parallel with the relative artificiality of the Piagetian experiments, providing their results with some useful explanatory value for the present case.

4. 12-15 Year Olds: Film as Communication.

At this age, while narrative is still critical there is a new flexibility about its use. Films are now more, not less complex than narratives, or rather they can no longer be strictly compared because of their lack of isomorphism. The preadolescent trend toward relating story outlines rather than conventional narratives was pronounced in the adolescent sample, with twelve out of sixteen Ss giving scenario or film plans. Compare, for example, the verbal approaches of two different fifteen year old males; the first gives a story, the second a scenario.

> A. Turtle and his wife were walking along. From outer space comes an ugly spider, a monster, and he somehow kills the husband turtle. Then the spider flies away. Then the wife turtle calls the ambulance and the ambulance comes to take the turtle wway. Then a dump truck comes along with a grasshopper in it . . . The spider comes along and comes up behind the grasshopper. The grasshopper notices him and drives his truck away fast. The spider can't catch him . . . (etc., for another page and a half).
>
> B. The spider will crawl along. And he's going to eat all these animals. He's going to crawl in and out of the barn. Later, he can crawl along through or under the lake and he can attack the army.

As might be expected, films originating from such story plans as B were much more complex in terms of spatial organization, object employment and character(s) interaction than their outlines suggested. Each of the narrative elements which is summarily described in the outline was elaborated filmically so that the films generally possessed thematic unity. It may be that the ability to relate such an outline is itself developmental and represents the ability of older children to simultaneously coordinate story and filmic domains such that specifying the details of set, action and relationship(s) prior to filming was not necessary. In any case, the shift in complexity level of articulation from the narrative to the filmic realm is an interesting reversal from the 9-11 year olds discussed earlier. Narratives from children under eight are a good deal more complex than the films they produced (2+ to 3 year lag) although, paradoxically, it is not the case that adolescent films represent a higher structural level than the narratives younger children can freely relate. It seems rather that potential narrative complexity was suppressed in the process of simultaneously coordinating verbal and visual realms.

In terms of expectations based on prior empirical work (Sutton-Smith, Botvin & Mahony, 1976; Mahony, 1976) neither adolescent stories nor films included usual structural features common to adolescent stories (delayed outcome, manipulation of form, etc.). Similarly, narrative content which might have been anticipated on the basis of Erikson's (1952) theoretical model (identity, social critique) was rare. Particularly for the males, themes were closely allied with those found throughout the earlier sample: a predominance of literal plots involving battles and attacks. Girls in both samples, however, evidenced greater diversity, concentrating more on themes detailing relationships between groups of characters or on the internal state of a particular character than on themes of an overtly conflictual nature.

Continuity with the preadolescent group is best expressed through the increased concern of the adolescents for veridicality of representation and for the spectator role. As two adolescent females put it, the most important thing in making an animation is to "try and make those figures look real, (to) have them do things humans do" (female, 15 years), "to get your main ideas across and not confuse the viewers . . . " (female, 14 years). Again, the means for actualizing such concerns were found through object employment and manipulation.

One can also look at the children's film narratives more simply in terms of their content, or in terms of the objects which they used. Clearly there are a myriad kinds of analysis which are possible. Some striking differences are illustrative as follows.

Content of Film Stories

Content analysis of the film stories in both samples evidenced a statistically significant division according to gender as indicated in Table 2 below. Male stories were most often about overt conflict--wars, battles, attacks and destruction--than either external states of affairs or indeterminate/internal states of affairs. External state of affair stories were more common to girls and dealt with perceptible events: fires, gymnastic feats, helping behavior and pollution. The breakdown below is not a reflection of whether the stories were comprehensible, i.e., whether they were "successful" translations of verbal narratives or whether a sense of thematic unity emerged, so much as the general class to which the actions portrayed could best be classed.

Table 2

Film Content, Males and Females

Age	N	Conflicts		External State of Affair		Indeterminate/ Internal State	
		Male	Female	Male	Female	Male	Female
5- 6	8	1	0	0	0	3	4
7- 8	8	1	0	2	1	1	3
9-11	12	4	1	1	4	1	1
12-15	16	8	1	0	8	0	1
Total Percent		63.6	9.1	13.6	45.5	22.7	45.5

In the few stories by females in which conflict was portrayed there was an important difference between their representation and that of the boys: conflicts for the girls were either (a) nullified, the conflict being artificial (e.g. the giant insects are not really harmful, but someone's pets) or (b) reflected only a portion of the film's action (e.g. before the characters are attacked they are all playeng together). Conflict and violence for the boys, on the other hand, was always the central and only action. Clearly, however, both sexes begin (at 5-6 years) with a similar concern for indeterminate states of existence which give way in the boys' case to conflict and in the girls' to external states.

Object Use in Narrative

As thematic variation throughout the sample tended to be minimal, a breakdown of object use was made for both samples, separated by gender. Five and six year olds, however, were excluded from the analysis because they tended to employ large numbers of objects at the expense of narrative content. Only those objects central to the film story were coded. Ss were given credit for objects in as many categories as they used, although only objects crucial to the narrative development were counted.

The objects available fell into four major categories:

1. War toys: planes, army men, cowboys, indians, giant insects
2. Animal toys: farm animals (as a group), cicadas, birds, bear, pigs, turtles, 'white' animals (elephant, mouse and rocking horse), stone frog, horse/cow
3. Person toys: Wanabee (gymnast), astronauts, Sesame Street characters, stone men, elf
4. Vehicular toys: ambulance/firetruck and driver, boat, trucks, cars

Table 3

Film Object Use, Males and Females

Sex	Ages	N	War Toys	Animal Toys	Person Toys	Vehicular Toys
Males	7-15	18	13	7	5	6
Females	7-15	18	2	15	12	2

Object choice throughout the sample was more gender contingent than developmentally based. As Table 3 indicates, typically "male" toys--planes, army men, cowboys and vehicles--were almost exclusively utilized by boys, whereas girls preferred the less pugilistic animal and person-like figures. Where males and females used the same objects there were differences in their respective employment. Males used the giant insects as malevolent creatures--attackers and destroyers--whereas girls who chose the insects cast them either as benign pests, incongruously large "pets" or threatening creatures, while only one female used them as destroyers. Farm anima1e were also used differently by both sexes, although chosen as frequently. Males used the animals in a general group as prey--hapless victims of the spider's aggression. Girls used the farm animals as either a main interactive character alliance or an a non-interactive group important for setting purposes. The one androgynous person-like toy, the elf, was gender defined by the S employing it; girls always made it female (Mother Nature, friend Jenny, etc.) while the one boy who used it regarded it as male.

In considering narrative as a whole it appears that the five to six year olds did not perform competently in terms of the narrative aspect of the assignment. Some of the seven to eight year olds were able to understand and carry out a visual translation of verbal content, and there was a gradual and steady improvement across all film content categories from 8+ through 15. However, only the oldest preadolescents and adolescents began to approach a fully adequate performance in most of the narrative categories.

CHAPTER VI

THE ANIMATION STUDY: MULTIPLE CODES OF FILM MAKING

Films are not just stories. The long case study materials of Chapters II and III illustrated just how much time the children had to spend in their attempts to grasp the technical requirements for making films. While narrative may have been a major mode for organizing their thinking about film making, it encompassed the merest fraction of the time that they spent on the task. We must now attempt to deal with that reality.

Other major processes which we have been able to distinguish in their work and with which we will deal shortly are that children bring with them to film making some expertise in dealing with objects. The codes that they have for dealing with these objects might be expected to play a part in what they will do with the toys we provide them in the animation experiment. In order for their object manipulations to be portrayed on film, these same objects must be arranged in space, and for that in turn to be meaningful space itself must be codified in some way. Again, films do not deal with static spatial arrangements. They deal with movements in space, so there has to be some code for how the objects are to be moved in space. Finally, the children must master the film techniques which most suitably register the way in which they are representing their narratives through the movement of objects in space. In this chapter then we deal with the way in which the children in our experiment not only codify (1) narrative, but also (Code 2) manipulate the objects, (Code 3) differentiate the spaces, (Code 4) move the objects in space, and (Code 5) manage the film techniques.

For the greater part we are engaged here in an attempt to describe what we see before us in this experiment. We concede that this is not fit commentary on film making in general because it deals (a) only with animation and (b) with only a one trial study. Clearly live film making is usually much more complicated and film makers who have a chance to learn from their own early mistakes and go on to other films are also much more complicated, as we shall see in our own workshop study that follows. Yet there is some value in looking at a beginning point. The matters that follow are highly complex even in this simple study. It at least gives us background for thinking in an area where this has not existed before. Most of the thinking about competence in developmental psychology, for example, is about such unidimensional tasks as those on space, movement, etc., which we will cite from Piaget's work. Yet what we must deal with here is a multidimensional domain where various competences must be blended together to create the product. So in the following analysis we try to go beyond the kind of task with which psychologists have usually occupied themselves. What we try to do is to give some preliminary formulation of the way in which these different kinds of competences (narrative, manipulation, space, movement and film technique) are variously blended together at the different age levels we have available in this study.

As Kjørup has said in his analysis of film (1977), film is "a meeting place of multiple codes." It is a kind of language in that it is "a means of communication and an object for study from many points of view" (p. 21). But unlike language there is no single set of syntactic, semantic or pragmatic rules. There are multiple sets which act both independently and interactively. To this point we have attempted to treat several possible narrative codes (Botvin, Todorov, miscellaneous codes for sex and object content) as if they were pretty much independent of film making. Now we must look at the other codes and pay more attention to the acts of synthesis required by film making. If we treat Narrative as Code 1 we can proceed first to Code 2, the manipulation of objects.

Code 2. The Manipulation of Objects

1. The 5-6 Year Olds.

These younger children come to this assignment with considerable competence in playing with toys and in general it seems that this is what they continue to do well with the materials which we provided in this experiment. They seemed to have little understanding of film making as an intrinsic relationship between filmmaker and camera, between themselves as initiating agent and the camera as recording instrument. Camera use was generally sporadic and imitative and not functional for the development of the film. Regard for the camera itself waxed and waned between interest and neglect while toy play continued throughout; in fact, the camera often appeared to be treated as if it were another manipulable (toy)--just one among many of the objects available for handling. Young children, therefore, seemed not so much to be making films as to be playing with a set of toys.

We can score their use of markers, props and time, defined as follows: Markers--written cards used as film titles ("Frankenstein at P.S. 3"), film codas ("The End") or as dialogue indices ("Kaboom"; "What's a bird doing up there?"); Additional props/scenery--introduction of hand-fashioned materials to better elucidate narrative action and/or setting (e.g. trees to create a forest, burnt house to depict fire); Mean running time--mean of the total running time of all the films within each age grouping. (Although films were shot to be played at 24 frames per second, they were coded and timed at 18 frames per second.)

Table 4 shows that their use of these elements (markers and props) was nonexistent. Lowenfeld and Britain (1966) reported a similar finding in young children's drawings: "objects do not relate to each other, but rather to the child artist. It is not until the age of 9 that we find drawings in which objects relate to each other and to the viewer" (p. 52). To the child animator, however, the large proliferation of film characters was a source of delight. One five year old girl excitedly shouted to her friend at the other animation table, "Come see how many friends Snoopy has. I've got 27 things, I've got 27 things!"

Table 4

Use of Markers, Props and Time

Age	N	Markers	Props	Time (seconds)
5- 6	8	0	0	12.3
7- 8	8	3	1	36.9
9-11	12	8	5	58.3
12-15	16	2	5	50.5

2. The 7-8 Year Olds.

Table 4 also shows some beginning of filmic use of the objects by a few in this age group. Usually, however, the objects were subordinated to the narrative and used only within the limits of the narrative. No new usage of objects is contrived (as is implied by the use of scenery, etc.). Still toy objects are clearly central characters and that is a usage which is relevant to the present statement, rather than as above only reflecting usages (codes) developed prior to this exercise.

3. The 9-11 Year Olds.

Titles, scenery and props were used here generally to differentiate the placement of the filmic action. For example, we find hand-written titles appearing telling us where we are ("Happy Acres Gymnasium"), introductory titles telling us we've been there ("The End"), and inserts informing us what it was like ("Kaboom"). Although not each specific type of marker was employed in every film at least one kind of marker generally was (eight out of twelve cases).

When ready-made objects, or those we provided, were used to flesh out filmic place they were generally not mentioned in the narrative itself, but added as needed auxiliaries. For example, a story about a "farm attack" (male, 9) included more than just a farm; a house with people inside was added. They were peripheral to the action--no one entered the house, nor did characters inside the house interact with those outside--but they provided a sense of "presence." Similarly, when a narrative called for the main character to "go to the Olympics" and be judged (female, 11), visual translation of the athletic event was elucidated and clarified by using a large group of characters to serve as non-interactive audience bystanders.

Sometimes, however, objects were used to expand the character domain. One ten year old boy who related a story outline about a "battle" used over thirty different objects in making his film. The objects were not randomly chosen nor arbitrarily colligated, but carefully coordinated into several interactive sub-groups. Therefore, from a vague characterization at the narrative-verbal level, we have a rich, complex and varied filmic social world.

Use of these ready-made materials tended to increase the total number of objects selected for the film. Unlike the youngest children who also amassed large groups of objects, the older animators made clear inter- and intra-object differentiation between scenic and character materials. Moreover, at the manipulative level every object or group of objects was accorded a particular role within the overall filmic action. As we will discuss later, however, this complexity of the object world poses problems for filmic translation.

The use of hand-made scenery and props extended the range of expressive possibilities available with the ready-made objects we had provided. Their employment added to the filmic representation and sharpened the narrative outline. Some of these personalized items included: hand-drawn background (inside a gymnasium, clouds in the sky), specialized dwelling places (haunted house, bird house) and special effects (explosion). For the oldest children (eleven years) use of these hand-crafted materials was sometimes linked with the emergence of separate scenes. Rather than setting aside contiguous spaces on the work table or sub-dividing existing areas, the table was cleared of all previous materials and reset with the newly appropriate ones.

The use of both ready- and hand-made materials may have been facilitated by children's ability to plan ahead. The younger groups (below nine years) would gather the needed toys, place them immediately on the table and begin filming. By contrast, with increasing age children tended to plan the course of action either prior to or while in the process of filming. Time was spend drawing the sets which would be needed and arranging the objects in elaborate configurations. Or, as in the case of one ten year old boy, the filming would be periodically stopped so that he could "think through" (visualize) how best to film a particular action. Such forethought may be contingent upon the cognitive ability to handle a future orientation, which is better developed with age.

4. The 12-15 Year Olds.

In common with the preadolescent group, ready-made objects were often used to better elaborate the filmic space and action, as were hand-fashioned props (e.g. trees to create a forest, a rescue ladder and burnt house to depict a fire, shredded paper to suggest pollution). However, use of such objects remained functional rather than expressive; there was no instance in which additional props were used symbolically or employed as a cue to characterization.

Code 3. The Differentiation of Space

The following distinctions were developed inductively by Zarum and Mahony from the empirical study of the children's films:

1. Undifferentiated Space--Use of one space for all narrative action; figure and ground (scenery and characters) within that space are either confounded or undefined.

2. Single Space--Use of one spatial arena for the general placement of action; figure and ground elements are well defined and differentiated from each other.

3. Single Segmented Space--Use of one major spatial area for the enfolding of narrative action. but which also contains one or more sub-areas.

4. Double Space--Employment of two different spatial settings and places for development of the narrative action. Can be achieved by either subdividing the work table into two different places or by replacing one series of sets with another.

5. Multi Space--Same as double space except that one more additional spatial division is made.

6. Narrative Scenes--Break in the narrative itself which is accomplished by either a change in setting or by the passage of time (e.g. gymnast goes to Olympics, night falls on a village followed by a change in activity the next day). In both cases there is a stop in the narrative and the sense that a whole new series of actions will commence.

7. Spatial Scenes--Resetting of the work table with new settings to signal another place of narrative action. A break in the action, however, is not implied; there is no temporal distinction (e.g. from village spider flees to ocean--new setting--and is immediately killed there).

Table 5 presents children's differentiation of space by age, using the rating scale just outlined.

Table 5

Spatial Differentiations

Age	N	Undiff.	Diff.	Segment.	Double	Multi	Scenes (space)	Scenes (time)
5- 6	8	5	3	1	0	0	0	0
7- 8	8	0	3	1	4	0	0	0
9-11	12	0	5	4	2	1	1	1
12-15	16	0	4	3	8	1	4	1

1. The 5-6 Year Olds.

These children did not use space to delineate a narrative setting so that we cannot ascertain where the film story is taking place. Space was utilized as a container, a bin to hold objects, rather than as a series of relationships or multiple coordinations among objects. Youngsters either failed to separate their scenery from characters, mixing the two in an indistinguishable grouping, or located their characters in undefined space. This phenomenon, too, has its analogy in the graphic arts. Lansing (1969) reported that children between three and six and one half years are at the "early figurative sub-stage" in which objects are unrelated to each other in space and no baseline separating figure from ground (character and scenery) is drawn. According to Piaget, this use of space is topological and reflects the child's earliest spatial orerations. Such topological notions are non-metric and non-projective in nature and do not allow for the coordination of spatial perspectives. Instead, they deal with the basic relations of proximity, enclosure and boundary. Failure to properly separate figure from ground and to simply amass large numbers of unrelated objects in a pile(s) illustrates the centrality of proximal relationships in children's use of space. Sometimes, when figure was differentiated from ground, the predominating spatial relationship was one of enclosure, such that filmic action centered on grouping as many characters as possible *into* a particular enclosure (house) rather than on creation of a story with action relative or external to the house (home-away-home). Other times spatial relationships were marked by boundedness, as when the front table edge delimited the film's spatial and temporal boundary. Here all objects are not only located in undefined space and all actions directed towards the camera, but the "story" itself stops when the objects reach the horizontal boundary so that "the end" is literally the end (edge) of the work table.

As all of the 5-6 year old behaviors suggested, the process of film making was a more salient concern than the product. Indeed, children spent much of their time manipulating objects and producing movements which would not be apparent on the finished film. It seems reasonable, therefore, to conclude that for 5-6 year olds film making was a sub-set of general play behavior engaged in for its own sake and not as a means to a *communicative* end.

2. The 7-8 Year Olds.

Despite some difficulties in spatio-temporal relationships there was a general advance in overall spatial concerns. Movements and actions of the focal characters were not coordinated to the camera in a one-way irreversible scheme, but were choreographed in an independent manner from the earlier irreversible, unidirectional movement scheme. These action paths, or spatial transversals, tended to become reversible and represented visually the gross verbal spatial distinctions of home-away-home. Six out of eight children evinced at least one form of spatial reversibility--horizontal left-right/right-left and up-down/down-up movement paths.

There is also a beginning use of filmic double space, adapted from the spatial division in the narrative, in which the locus of action shifted from one spatial setting to another. New spaces, however, tended to be contiguous to the home space and were photographed from more or less the same camera distance as the home space (preserving figure/ground constancy). These spaces were not separate scenes, but sub-areas within the circumference of the work table, visually connected to each other by moving the camera and tripod back and forth between areas rather than by panning.

Emergence of reversible movement patterns and clear figure/ground differentiation signals a shift from topographical to projective spatial operations. Projective space, according to Piaget (1967), is concerned with:

> locating objects and their configurations relative to one another in accordance with general perspective system or according to co-ordinate axes . . . Projective space begins at the point when the object or pattern is no longer viewed in isolation, but begins to be considered in relation to a point of view. This is either the viewpoint of the subject, in which case a perspective relationship is involved, or else that of other objects on which the first is projected. Thus from the outset, projective relationships presume the inter co-ordination of objects separated in space. (pp. 153-154)

When children separate figure from ground through the creation of a baseline, the characters have a definite location in space relative to a fixed point. This relationship becomes further elaborated through creation of a line(s) of movement.

For Piaget, it is the ability to construct a straight line--or more properly to grasp the notion of continuity inherent in constructing a straight line--that serves as a bridge between topographical and projective space. The ability of our seven and eight year olds to segment movement along a horizontal continuum from point A to point B (and back again to point A) constitutes a projective construction and introduces the concept of distance. With the representation of distance, home-away-home transversals become possible and a unified perspective or point of view is achieved. Moreover, the three-dimensional quality of projective space is also attained through the movement patterns of right/left (horizontal path), front/back (vertical path) and above/below (up/down path).

3. The 9-11 Year Olds.

This is clearly the age where most of the various kinds of space (differentiated, segmented and double) begin to be used.

4. The 12-15 Year Olds.

At this age the manner in which the props were used to delineate spatial layout evidenced a new trend. Employment of separate scenes was still relatively rare, but the manipulation of props within a scene became more complex. Adolescents began to forego the lateral placement of scenery and a single baseline for a vertical placement of props and absence of a baseline. In such instances (male, 14; female, 15) the work table was divided vertically instead of horizontally with scenery flanking the character from both sides and the character itself moving between embankments. The advantage of this arrangement was the creation of "deep space" throughout the entire film. Although the depiction of depth could be found in films as early as seven or eight years, its use was sporadic; characters might move from front to back, but the majority of the action remained coordinated along two-dimensional lines (horizontal left-right/right-left). Now, however, the entire scenic lay-out as well as the movement paths, reinforced the feeling of perspectival space.

Where lateral spatial placement still persisted, some adolescents broke with the strict prosenium-like set by placing their props asymetrically on the table or by positioning scenery at right angles to the camera. Intersection with the technical system occurred in many of these cases where, as will be discussed later, the camera is manipulated so as to reinforce the depth illusion and/or to provide new views of the spatial arrangement.

While perspectival concerns of this nature appear in film making only at adolescence, there is evidence that they surface earlier in the graphic arts. Lansing (1969) found that children between nine and twelve are at a "late figurative substage" in which the base line disappears, plane perspective appears, overlapping and size change create depth and a general increase in overall visual realism emerges. Similarly, Lewis (1969) found that ability to properly represent spatial depth in drawings increased with age; first and second graders were almost unanimously unable to solve perspectival problems, while over half of the fifth and sixth graders tested were successful. Comparisons with the graphic arts are somewhat specious. Past a certain point, we cannot be sure that children's graphic behavior is not more the result of certain technical abilities than conceptual understanding. Then too, given the actual conditions of the film making task, the early emergence of some depth relation was not surprising. What does seem to be the later development and more comparable to the use of perspective in drawings, however, is the centrality accorded to perspectival concerns.

Changes of setting indicative of new scenes were somewhat more frequent now, yet the idea of a scene as a new narrative chapter with own beginning-middle-end structure embedded within the larger beginning-middle-end was present in only one case. Hence scenes were generally spatial rather than narrative divisions and signaled a new action arena. This incorrect equating of spatial displacement with narrative development may have been partially the result of confusing subjective time with film time. Because it took so long to develop the plot line in the former space, changes to the latter area may have felt like true narrative divisions. In any case, the subjective feeling that the new space represented a separate narrative segment, divorced from the first, was reinforced through the application of stillness to establish the new spatial setting (inter-scenic stillness). As one adolescent (male, 15) replied when asked why he was using stillness between a camera position and scenery change: "because they (the audience) get another viewpoint . . . (You have to) let it sink in a little bit."

Despite the new spatial advances, vestiges of earlier problems remained. Spatio-temporal confusion reminiscent of the seven to eight year olds was rare, but did occur. Out of "nowhere" a house was suddenly made to appear (female, 13) or new characters were abruptly added to an established scene and disappeared just as brusquely.*

Code 4. The Movement of Objects

The categories inductively developed for this code were as follows:

A. Movement Pathways

1. No or Minimal Movement--Absence of a directed path of action for character(s). Either figures do not move at all or do so minimally in a seemingly arbitrary pattern. Movement here does not amplify any narrative action.
2. Lateral Movement, One or (3) Two Way--Development of movement pattern such that a figure(s) moves from either right-left or left-right or

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* This adolescent's film is problematic: in conception and execution it is indistinguishable from five to seven year old films. The major factor responsible for such a seemingly regressive film appeared to be the object use requirement. When given a piece of clay to manipulate, after completion of his film, this S's interest soared. He admitted that he found the objects boring and restrictive. The clay animation which he made was more complex and comprehensible than the object animation and recalls Golomb's (1973) empirical work which found that the structural level of children's art was dependent upon and conditioned by the medium in which they worked.

both right-left and left-right (i.e., reversible versus non-reversible spatial transversal).

4. Front-Back Movement, One or (5) Two Way--Development of movement pattern such that a figure(s) moves from front to back or back to front or both front-back/back-front.

6. Vertical Movement, One or (7) Two Way--Development of movement pattern such that a figure(s) moves from up to down or down to up, or both up-down and down-up.

8. In-air Static or Unsegmented Movement--Development of movement pattern where a figure(s) is suspended from a string and either just hangs or moves in an unsegmented fashion via a push.

9. In-air Kinetic or Segmented Movement--Development of movement pattern where a figure(s) is suspended from a string and sense of movement is captured by segmenting the flight of the figure (e.g. plane suspended from a piece of string is held before the camera; the animator moves the plane forward, clicks the trigger, moves the plane again, clicks trigger, etc.).

10. Circular Movement--Development of a movement pattern such that the figure(s) moves in a circular path of some sort.

11. Reactive Movement--Movement back from impinging approach.

12. Backward Movement--Development of a movement pattern such that figure(s) moves backward, although it faces front (e.g. backing a truck into a building).

13. Coordinate Movement--Development of movement pattern such that the trajectory of one figure(s) intersects with that of another.

14. Meeting Movement--Development of movement pattern such that one figure(s) meets another(s) coming from an opposite direction.

B. Movement Strategies

1. Intra-Object Movement--Manipulation of the parts of a whole object (e.g. legs of a moveable bear, arms of a doll).

2. Gradual Entrance and Exit--Presence of at least some graduated means of introducing or exiting characters so that a sense of temporal continuity is maintained; that is, a character does not suddenly appear in one frame and disappear in the next, but slowly exits from the scene.

3. Speed Variation--Intentional manipulation of the rate of speed at which a character(s) moves. May be used to illustrate a change of action, such as transition between walking and running or as as a comparison between objects, such as a truck moving faster than a spider. (Note: This is not always apparent on the finished film, although Ss were

given credit for it if their actions in effecting the variation were correct.)

4. Intuitive Parallel Action (Single Space)--Development of two separate series of action (by two different characters or groups) occurring in the same space (e.g. two characters play tennis in the foreground while two others run around the house in the background).

5. Parallel Action (Separate Space)--Conventional technique of developing two different actions which occur simultaneously in two different spaces and represented via a cross-cutting between actions/places.

Tables 6 and 7 summarize the use of these various movement pathways and movement strategies by children in the current sample.

Table 6

Movement Pathways

Age	N	No or Minimal (1)	Lateral (One-Way) (2)	Lateral (Two-Way) (3)	Fr/Bk (One-Way) (4)	Fr/Bk (Two-Way) (5)	Vertical (One-Way) (6)	Vertical (Two-Way) (7)
5- 6	8	3	2	0	3	0	0	0
7- 8	8	1	1	5	0	5	0	4
9-11	12	0	5	7	2	5	0	2
12-15	16	0	9	7	4	7	0	4

Age	N	In-air (Static) (8)	In-air (Kinetic) (9)	Circular (10)	Reactive (11)	Backward (12)	Coordinative (13)	Meeting (14)
5- 6	8	1	0	0	0	0	0	0
7- 8	8	1	0	0	1	0	0	0
9-11	12	3	2	7	1	1	0	3
12-15	16	3	5	7	3	3	2	4

Table 7

Movement Strategies

Age	N	Intra-Object (1)	Entrance/ Exit (2)	Speed Var (3)	Parallel (Single) (4)	Parallel (Separate) (5)
5- 6	8	0	0	0	0	0
7- 8	8	0	0	0	0	0
9-11	12	3	7	0	0	0
12-15	16	2	13	6	3	1

1. The 5-6 Year Olds.

The youngest children in this study could not represent movement at all or at least did so inadequately. Difficulties in representing movement are also found in the graphic realm. Lark-Horovitz and Lewis (1967) reported that young children would employ literal devices to portray movement such as drawing the trajectory of a moving bullet, or would use spatial placement to imply kinesis so that a man picking apples would be drawn by having the man touch an apple tree.

It is not only their relationship to the camera that children at this age do not understand, but the more general nature of film itself. The training tape had briefly discussed how films were a static form made kinetic ("films are composed of a series of still pictures which pass so quickly that they appear to move") and the children had the opportunity to experience a film in both its states (looking at a strip of film, then seeing that same clip through an editor-viewer). Yet the kinetic quality of film was not grasped. This can be inferred from the manner in which they manipulated the objects on the work table. Where, for example, older children consistently moved a particular object(s) along a path in a well-defined series of steps, these younger children most often tended to move their objects in enormous leaps, or in a seemingly arbitrary pattern of small and large steps. Good continuity and smoothness of movement in object manipulation was absent. All of our sample at this age demonstrated difficulty in representing flux at the level of object manipulation. In other words, the concept of flux or the attempt to represent smooth, unbroken movement--the defining element of film itself--was firstly absent in their object play. When their play became translated io film the degree of flux dropped even more. Thus, the problem was not how to translate smooth flux from object manipulation to celluloid, but the more general problem of representing flux at all (Rand, 1969).

In order to represent flux the child must be able to handle what Piaget and

Inhelder (1969) call kinetic anticipatory imagery. That is, children must be able to visualize a series of spatial displacements from one point to another. However, prior to the attainment of concrete operational thought at about seven years of age the child's imaginal capabilities are predominantly reproductive. He can imagine only events and actions which he has previously witnessed or learned. As Piaget and Inhelder (1969) concluded after researching the development of children's imagery:

> Our studies indicate that the mental image of the child at the pre-operatory level are almost exclusively static. He has systematic difficultires in reproducing in imagery movements or transformations he has observed. It is not until the level of concrete operations that children are capable of reproducing movements and transformations and by this stage the child can also anticipate in his imagery movement and transformations. (p. 71)

If we reflect upon what the task of film making requires, the importance of anticipatory kinetic and transformational imagery becomes apparent. We must be able to hold in mind or project what our movements on objects will look like on celluloid. If the film itself is to communicate a story or idea, then we have the additional problem of imagining how comprehensible those object movements will be to a spectator.

The five and six year olds were unable to effectuate these tasks. It appeared as though they were only able to image reproductively and statically. They would often form large groupings or colligations of characters and simply proceed to reposition those characters someplace else on the work table, moving each object to its new place in one movement. Sometimes the trigger was pressed after each movement, but sometimes only after all movements had been made, resulting in either minimal kinesis or no apparent movement.

From the viewpoint of Piaget and Inhelder's pioneering research, the behavior of our youngest children was not too surprising. Others have developed similar results. Wolff and Levin (1972) instructed kindergarten children and third graders to produce kinetic imagery to facilitate learning a series of pair-associations between several sets of toys. Results showed that kindergarten children receiving imagery instruction performed no better than non-imagery controls. This suggests, the authors feel, "that the child's ability to form dynamic mental images, or at least his ability to generate and use them covertly . . . is minimal at 5½ years" (p. 545). By eight and one half years, however, imagery was able to facilitate performance. Annoshian and Carlson (1973) also investigated kinetic imagery in children and, while refuting Piaget's contention that kinetic imagery depended on the attainment of concrete operations, they did find its appearance related to chronological age, appearing somewhere in the latter half of the seventh year.

2. The 7-8 Year Olds.

At this age lateral and two way front to back and vertical come into the repertoire of about half of the children, but that is all. Still these movements are sufficient to permit representation of plot.

3. The 9-11 Year Olds.

In our seven to eight year olds object movement was either of a successive or simultaneous nature; that is, objects were moved either one at a time or together, but not in any combination of modes. After about nine, however, children were able to mix both patterns and to choose between movement possibilities on the basis of their appropriateness to filmic action.

In addition to the flexibility of pattern choice the segmentation within each pattern increased; i.e., the representation of flux became still smoother. Where, for example, an eight year old represented a character's approach to an open dump truck smoothly, entry into the truck itself was accomplished in one step. By contrast, a ten year old with a similar set-up not only better segmented his object's approach, but segmented its entry into the truck by scotch-taping the object to the vehicle's side in a series of ladder-like steps.

Concomitant with the further refinement in representing flux was the beginning of gradual entrance and exit of objects. When younger children introduced or removed characters and settings, they tended to effect their appearance and disappearance in an abrupt, all-at-once fashion. We might see, for example, a house with two characters in one frame and then the same house with eight new characters in the next. Or conversely, the house with eight characters in one frame and only two characters in the subsequent shot. Older animators, however, began to introduce and exit their objects gradually so that the characters' action or purpose are somewhat specified and not the result of a "magical" appearance or disappearance. While this phenomenon occurs amongst the oldest children it is not, however, consistent; abrupt entrances and exits are mixed with graduated ones and, therefore, such differentiation is an emerging tendency.

Intra-object movement was another option which surfaced with age (ten to eleven). Children began to animate moveable pieces within an object--such as a doll's limbs or a building's doors--demonstrating a move from unarticulated to articulated object movement.

Directionality was another attribute of movement which became more flexible and varied with age. Reversible lateral spatial patterns still predominated, but circular and backward paths also appeared. On-ground movement was no longer a problem and concern began to shift towards representation of in-air movement. Previously children were unable to represent planes or flying objects kinetically; the object was merely suspended from a string or photographed statically, or pushed by the child and photographed while moving wildly. Neither approach yielded realistic, like-life movement. Now, however, a more sophisticated attempt was made whereby the child held a plane suspended and segmented its trajectory before the camera.

Intersection of object image and object actions can best be illustrated by an example. An eleven year old girl wanted to realistically portray a cycle of movement--a gymnast scaling a piece of apparatus known as a "horse." As we had no such object available, the child improvised by drawing the apparatus on a piece of cardboard. She moved the gymnast toward the picture in a series of discrete steps to indicate her approach and then created the illusion of scaling by throwing the object into the air several times and clicking the trigger after each throw. To capture the gymnast's descent, she drew a picture of her character underneath the horse (matching color and proportions) and photographed that. Then she covered up the two-dimensional representation and brought back the three-dimensional object. The entire sequence, therefore, combined scenery and object manipulation in such a manner as to depict a complex, continuous and reversible cycle of movement.

4. The 12-15 Year Olds.

What these adolescents generally included that the younger animators did not and what, consequently, rendered their films at a higher level, were other more complex manipulations which are not found in the younger films. For example, in the animation of a thirteen year old female, we evidence parallel action. A group of "squatters" is shown lolling about a house in the background and then a cut is made to a huddle of animals in the left foreground discussing (via stillness) their reaction to the squatters, followed by a third direct cut back to the house and the actions of the squatters.

This example of parallel action is itself a new behavior seen for the first time in the adolescent group. Although conceptually the equivalent in cinematic parallel action form, in its switching back and forth between two simultaneous events it is not operationally well developed and does not constitute a readily observable, integral part of the plot line as conventional parallel action does (e.g. sustaining suspense). It is, however, a sophisticated attempt to execute simultaneity of action. Other animators also attempted to portray two simultaneous events, but without employing the traditional cross-cutting format; instead, two different sets of action developed within the same frame. Such "intuitive" kinds of parallel action included shots of two figures playing tennis in the foreground while two other characters board. She moved the gymnast toward the picture in a series of discrete steps to indicate her approach and then created the illusion of scaling by throwing the object into the air several times and clicking the trigger after each throw. To capture the gymnast's descent, she drew a picture of her character underneath the horse (matching color and proportions) and photographed that. Then she covered up the two-dimensional representation and brought back the three-dimensional object. The entire sequence, therefore, combined scenery and object manipulation in such a manner as to depict a complex, continuous and reversible cycle of movement.

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As the Tables 6 and 7 suggest, adolescents were able to create smooth movement, to manipulate objects both successively and simultaneously, to employ gradual entrance/exit of objects, and to use intra-object movement. They quite readily utilized a combination of different movement paths; the relatively new patterns of backwards, coordinate and meeting patterns were used in conjunction with the older and more conventional paths.

Despite their greater facility these animators nevertheless encountered difficulties in expressing feelings or internal states--a new problem for some female animators. Audience recognition of action/events is lucid when those behaviors deal with perceptible relationships between characters and their environment. Battles, explosions, fires, etc., fall within this category and are, consequently, visually comprehensible. When internal behaviors or relationships are the focus of attention, the finished film is less clear--we cannot easily discern that a character is lost or feels rejected, even though all the film's action may revolve around the expression of such states. Since only female stories contained affective elements, their films are less thematically comprehensible on the whole than the males', and females are, in some sense, penalized for dealing with emotions and relationships.

The task involved in delineating inner states depends on an ability to "spatialize" emotion. Internal behavior must be expressed via outward action; the problem, therefore, is to translate a particular feeling or state into its behavioral analogue.

Because the available objects did not easily lend themselves to emotive expression (i.e., none of the facial expressions on the figures could be altered), the problem was doubly difficult. How, for example, without indicating facial perplexity can two characters be portrayed as lost? A film by a fourteen year old girl concerns the plight of two lost cicadas who, wanting to return home, go in search of people who can aid them. "Lostness" is not expressed; we see only the two bugs approaching a third character with some stillness added to indicate dialogue amongst the group. Not knowing the initial state of the characters (their disequilibrium) masks the sense of their subsequent actions. A way out of this dilemma could have been found by spatializing the concept of lostness: the cicadas could have been shown wandering about in circles before encountering their helper and props simulating a forest of strange,eerie place employed.

Similarly, in another film by a fifteen year old female, the state to be expressed was a transformation from animacy to inanimacy. Two turtles find a teddy bear who, miraculously, comes to life and then (just as miraculously) resumes his inanimate state. "How can I show that the bear is no longer alive?" She came up with several possible solutions, the most tenable being the creation of a contrast. A new character, a butterfly, was introduced and the turtles ran after it while the bear remained still. "But it will probably just look like they've made a friend and just ditched him somewhere." At least the problem is cognized and the animator is not egocentric in thinking that an audience would automatically grasp her intentions.

Adolescents had somewhat less trouble in expressing certain kinds of interpersonal relationships through movement. Instead of using stillness to indicate a conversation between characters, a more kinetic solution could be employed. Through a series of movement simulating gesticulation, characters could appear responsive to each other. This notion of action-reaction also became important in portraying the concept of malevolence. When younger children depicted aggression or "evil" they showed only a one-way interaction: the spider stalked his frozen prey. The idea of evil, of unwilling coercion through force, is not very clearly elaborated by such passivity on the part of the spider's victims. Through inclusion of the opposite movement--avoidance to the spider's approach--the nastiness of the situation materializes. One fifteen year old male, for example, showed a spider terrorizing a barnyard of animals. The spider greedily gobbled them all up, except for one ram, whom the animator made wander about the empty corral looking for a means of escape. Or, as another fifteen year old explained when asked why she was making a bird retreat from the path of a spider, "the important thing is to have the bird react to what the insect does." And, as a fourteen year old replied, while suspending a dog from a piece of string to indicate its fearful reaction to gunshot sounds, "you've got to get as much realism as possible." General physical causality, too, is better expressed in the adolescent sample: a hose is pointed toward a fire and fire graduallv diminishes; a boat hits a rock and explodes into flames; a horse intercepts a line of cars and keels over.

Movement was also the means used to better personify a character and to create a filmic leitmotif. While not apparent in the finished film, one thirteen year old female did attempt to endow her antagonist, the spider, with a variety of eating styles by altering his mode of movement toward potential victims. Using a particular character as a non-interactive observer or silent commentator occurred to one twelve year old boy, who punctuated an attack scene by having Oscar periodically pop up from his garbage pail to survey the situation.

Representation of affect and/or realism was also effected through varying the rate of speed at which characters moved. To show two turtles playing tennis and quickly traversing the court, larger gradations between successive moves were employed than those used to illustrate characters walking (female, 13). In a similar vein, with a truck and a spider in the same frame, the truck was moved in larger steps than the spider to show that "the truck drove away faster than the spider, so the spider didn't catch them" (male, 15). In order to make a bear run away from fright, trigger presses were reduced between moves from four to two (female, 15), and they were to illustrate two characters involved in a chase (female, 15). Variation in number of clicks per move was also used to differentiate between walking and running movement of a spider (male, 15). As these examples illustrate, speed alteration was accomplished either by increasing or decreasing the amount of gradation between moves or by increasing or decreasing the number of trigger presses between moves--but only in one case by combining both techniques. Thus, in contrast to the seven and eight year olds who remained rule-bound regarding the number of trigger presses (which were seen as inalterably fixed), and to the nine to eleven year olds who altered presses to increase the amount of stillness for dialogic purposes, adolescents consciously manipulated trigger pressing to alter rate of movement as well as duration of stillness. Due to an incomplete understanding of film time, however, these variations were not always recognizable in the finished film. Once again, an overall conceptual understanding sometimes outstripped its practical application.

Code 5. Film Technique

We arrive finally at the children's use of film technique. The categories taught to the children and developed by them in the course of the study were as follows:

A. Techniques Taught

1. Close-up--Alteration of visual field such that attention is focused on a tight view of character or scenery.
2. Long Shot--Alteration of visual field such that a view of the entire action or setting is apparent. Both the whole character(s) and the entire spatial locale are given.
3. Seriated Zoom In--Manipulation of the zoom ring in a series of steps such that movement towards an object or event is accomplished in a gradual fashion.

4. Seriated Zoom Out--Manipulation of the zoom ring in a series of steps such that movement away from object or event is accomplished in a gradual fashion.

5. Change Camera Position--Movement of the camera and tripod from one side of the work table to any other side(s) such that a visible difference in camera angle is apparent.

6. Intentional Reverse Angle--Movement of the camera and tripod from one side of the table to its opposite side,expressly for the purpose of shooting the same scene from a different point of view.

B. Narrative Film Techniques Taught

Establishing Shot, (1) Static or (2) Kinetic--Static extablishing shot refers to the use of stillness (24+ clicks) at the opening of the film to establish the general setting prior to the inception of the action. Kinetic establishing shot serves the same purpose, but employs camera movement, such as a reversible pan of the general setting.

End Shot, (3) Static or (4) Kinetic--Static end shot is the use of stillness to signify that the film is over. Kinetic end shot serves the same purpose, but is done via action of either camera (pan) or objects (moving line of cars ends the film).

C. Spontaneous Techniques

1. Pan--Movement of camera front left to right, right to left or up and down to either follow the movement of a character from one space to another or to survey the general scene. Accomplished either by tilting the camera in a series of steps or by actually moving the camera and tripod along the edge of the work table.

2. Camera Crane--Raising or lowering the tripod to photograph events from either a higher or lower camera angle.

3. Kinetic Zoom--Simultaneous manipulation of the zoom ring and object to show camera moving closer or farther away from an object, itself moving either closer or farther away. (Note: This technique, too, was not always apparent on the finished film although Ss were given credit for it if they executed the necessary operations correctly.)

4. Special Effects--Introduced by children.

In the following tables the essential findings for technique are described in various ways. Table 8 gives the results for those techniques that were taught, and Table 9 summarizes the techniques spontaneously employed by children.

Table 8

Techniques Taught

A. Film Techniques Taught

Age	N	Close Up (1)	Long Shot (2)	Zoom In (3)	Zoom Out (4)	Camera Change (5)	Reverse Angle (6)
5- 6	8	2	1	1	1	1	0
7- 8	8	3	1	0	0	2	0
9-11	12	10	8	4	3	3	0
12-15	16	13	11	9	8	6	2

B. Film Narrative Techniques Taught

		Establishing		End	
Age	N	Static (1)	Kinetic (2)	Static (3)	Kinetic (4)
5- 6	8	0	0	1	0
7- 8	8	4	0	2	0
9-11	12	8	1	7	1
12-15	16	14	1	8	3

Table 9

Spontaneous Techniques

Age	N	Pan (1)	Crane (2)	Kinetic Zoom (3)	Special Effects (4)
5- 6	8	0	0	0	0
7- 8	8	1	1	0	1
9-11	12	5	1	0	2
12-15	16	4	2	5	6

1. The 5-6 Year Olds.

When these children did attend to the camera they usually failed to maintain the necessary isomorphism between object movement and trigger presses (six out of eight subjects). Sometimes they moved a piece and never bothered to click the trigger to record those movements; other times they arbitrarily varied the number of clicks (six for one move, three for another, four for the next, etc.). One boy who did preserve the necessary isomorphism ended by segmenting the movement pattern of each object into four discrete steps before pressing the trigger. It appeared as though he internalized the instructions from the training tape: "move the object slightly, click four times," as "move your object four times, then click once." Had the child understood the idea behind movement/clicking patterns such incorrect imitation would have probably been less likely.

Related to the difficulty of establishing movement/trigger isomorphism was the confounding of the camera's visual field with the child's own perspective. Children often looked through the camera, saw the visual field from the camera's viewpoint, and yet proceeded to move an object clearly beyond the camera's range. Observational notes, for example, described the behavior of one five year old:

> Subject moves bird. Rechecks camera and clicks trigger, but bird is not in the camera's eye. Once again, although S rechecked the camera she moves an object not in its view and presses the trigger.

It was as if the child reasoned: "if I can see it, the camera can see it." And the further assumption seemed to have been made that "if I manipulate the objects on the table the camera will automatically reflect those changes." Thus, a child would move a particular object across the work table and not bother to press the camera's trigger. Yet when asked, "will what you did appear on your finished film?", he would respond affirmatively.

Appearance or disappearance of objects was understood in the same fashion. If a child wanted to show a character disappear and reappear someplace else, he might click the trigger only at the character's reappearance, not realizing that to establish its disappearance a series of trigger presses with the figure missing was necessary. Such confusion between subjective action and objective filmic registration was also indicated by the large and frequent number of framing errors made. Children would stand between the camera and the work table, which resulted in their photographing themselves. Repeated explanations and cautions were to no avail.

These behaviors perhaps reflect the child's syncretic (Werner, 1948) or egocentric (Piaget, 1969) thinking. Subjective and objective realms are easily fused; the child cannot separate his self from the objective arena in which he operates, nor can he differentiate his actions on an object from the action or behavior of the objects themselves. Piaget (1969) describes egocentrism:

> At the outset of mental evolution there is no definite differentiation between the self and the external world . . . impressions that are experienced and perceived are not attached to a personal consciousness sense as 'self' nor to objects conceived as external to the self. They exist simply in a dissociated block . . . (The) opposing poles (of self and other) will only gradually become differentiated . . . consciousness starts with an unconscious and integral egocentricity, whereas the progress of sensori-motor intelligence leads to the construction of an objective universe in which the subject's own body is an element among others and in which the internal life, localized in the subject's own body is contrasted. (p. 13)

Though the child by age five is well past the sensori-motor stage and has differentiated between self and other in many respects, egocentric thinking can still persist in novel adaptive areas. While he knows that he is not the camera, that the camera exists external to him, he still has difficulty in differentiating his own actions from those of the camera and, in a sense, replays at a higher level the fundamental problem of object permanence. There too, the child's thinking is dominated by his actions--although he sees an object being hidden in a new place, he returns to the site at which his actions had previously enabled retrieval of the object. It is as though "the position of the object depended on his previous search which was successful rather than upon changes of places which are autonomous and independent of the child's action" (Piaget & Inhelder, 1960, p. 14).

2. The 7-8 Year Olds.

Film technique began to surface, but it was generally limited and not coordinated to highlighting the crucial points in the film narrative. Close-up shots on main characters occurred, but generally not on the actions of those characters. Similarly, long shots appeared, but they focused on static settings rather than ongoing events. Therefore, although the figure/ground relationship is well specified, it tends to be a relatively constant one, punctuated or altered by infrequent close-up/long shots. The camera itself usually remained in a static position, giving us a fixed viewpoint, prosenium-like representation of events. In this respect children were not unlike the early professional film makers, whose camera captured events from a single, fixed point of view (Mast, 1976).*

Both technical and object manipulation behaviors indicated a greater ability to decenter than the five-six year olds displayed. As would be expected for children entering concrete operations, they were able to begin taking several perspectives on the same item of information simultaneously as their attempt to coordinate story and filmic realms showed. Other research in aesthetic development also found that seven to eight years was a critical time in effecting dual coordinations. Sutton-Smith, Lazier and Zahn (1971), Sutton-Smith and Lazier (1971), and Lazier, Sutton-Smith and Zahn (1971) found that it was not until after about age seven that children could coordinate their spontaneous role-playing with a sense of the audience in order to create an objective dramatic performance. While they could play before an audience at a much earlier age, it was not until about seven that they began to adopt the conventions of stage theatrics (gestures, exaggerations, etc.) as a system for communicating with that audience. In a study of word play, Sutton-Smith (1976) noted that riddles which involved the dual classification of the same homonym into two different meanings did not occur until this age.

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* The use of technique summarized in Table 9 may be somewhat inflated by the action of a "technical wizard" of seven years. Because his concern was with the camera only, he discovered several techniques spontaneously (camera cranes and pans) and exployed a plethora of taught ones (15+ camera position changes!). These machinations, however, were done for their own sake and often proved distracting to the eye.

Yet the films of the seven to eight year olds should most properly be considered transitional. Although they represent a *qualitatively* new stage from those of the five to six year olds, their coordination efforts and conceptual understanding were imperfect and this rendered their films qualitatively different from those of older animators. It is not only the ability to simultaneously handle both realms that is important, but an ability to effect the coordination such that the filmic realm compensates *in its own terms* for the narrative. As pointed out, this was not done; filmic ideas were expressed via narrative conventions. Better developed narrative skills are only partly responsible for the phenemenon; limited conceptual grasp of filmic principles also contributed. Most children, for example, did not understand that eight clicks instead of four per move would appear differently (longer) on the finished film. One eight year old believed that "eight clicks would make it move twice instead of once," confusing the basic relationship between apparent movement and trigger presses. In fact, because the nature of film remained so vague, children acted very rule-bound. If, instead of clicking four times they accidentally added an extra trigger press, they would become upset. This was a "mistake," although in terms of film time it represented an imperceptible .041 of a second! Another eight year old applied an additive principle in dealing with trigger presses. He moved the camera to a new position and did a second of stillness and then added eight more clicks because he also manipulated the zoom ring (32 clicks = 24 + 8). When asked why he clicked 32 times, he replied: "Because I moved the (zoom) ring and made it close and because I wanted to have a second of stillness just to see the house." While this behavior is not incorrect per se, what this animator was doing--and what he did throughout the course of his film--was to *add* the rules for trigger pressing together. There is no reason to add stillness and close-up presses together unless you want to show increased duration. This boy, however, did not see it as an overall increase in time--in holistic terms--but as a necessary application of the rules governing movement which must be cumulative to account for each separate object action.

There appeared also to be a new kind of egocentric confusion, reminiscent of the mistakes made by five to six year olds, between actions on objects and filmic registration. When scenery had been inadventently moved, most children were not aware that these position changes would be recorded in the same fashion as their character position changes. It seemed as though they understood the relationship between movement/recording only when the movements were intentional. Although framing errors were few (hand or body in picture), the ability to maintain filmic illusion was low. Multiple table edges and portions of the room appeared in all these films. Once again, the defining criterion for these children may have been their own visual fields; that is, only what they wanted to show on film would be apparent and, therefore, only their intentional actions on characters would be registered--not the extraneous portions of the camera's visual field.

The transitional nature of our seven to eight year old animators can perhaps be best expressed through an analogy with language. If we consider filmmaking as the acquisition of a visual language, then seven to eight year old behavior constitutes a bridge between egocentric and socialized speech. Piaget (1955) has characterized egocentric speech as verbal behavior which serves subjective (private communication) rather than objective purposes (conveying information to others). The spontaneous collective monologues he noted bear a similarity to the filmic language our youngest children used. In verbal collective monologues, two or more children are involved in a conversation, but they do not talk to each other; instead, each child rambles on about what interests him. Filmmaking for the five to six year olds was not an activity to communicate an idea to someone else (with audience as conversational other), but a self-absorbing, private activity. Children between seven and eight, however, were on the borderline; filmmaking was not quite a private activity, but nor was it a deliberately social one.

Piaget also found egocentricity pervading directed speech. When children under seven were specifically asked to reiterate a story and/or causal explanation to another child their responses were garbled and confused. Children tended to use pronouns and demonstrative adjectives unclearly; they juxtaposed the order of events, tended to omit important notions and strung together statements in a non-integrated fashion. These verbal behaviors have a visual analogue in the early films: youngsters failed to specify a main character(s), filmic action was unclear and appeared without order, and characters were colligated together in an unrelated, non-interactive fashion. In general, both modes of communication were more a series of fragments than a unified, synthesized whole.

Socialized speech occurred in both children's spontaneous and directed language after the age of seven. Conversations between older children were marked by a reciprocity of exchange and their stories/explanations were comprehensible to each other. Although our seven to eight year olds avoided the more egregious egocentric errors, their films were not yet at the level of socialized speech. But because they did attempt to record their stories in an orderly, structured manner their films represent a point of transition in the shift from egocentric to socialized visual language.

3. The 9-11 Year Olds.

The majority of the filmmaking behavior discussed so far does not directly involve camera technique as such. Although technique was matched to content, highlighting and emphasizing "crucial" characters and events in the filmic narrative, technique was not an expressive concern in and of itself. Rather its employment was functional, serving to further represent narrative elements. Narrative-related techniques which emerged with some regularity by nine to eleven years included the near ubiquitous presence of close-up or long shots alligned with narrative content and of establishing or end shots.

Major difficulties, as well as advances in technique, centered about kinetic camera concerns. Seriated zoom ins and outs were still relatively rare. When these zooms were employed they focused on a static object or event, that is, only the camera moved, not the photographic target. So while movement with objects is well differentiated by nine to eleven years, the coordination between object movement and camera manipulation is still a problem. Similarly, it is not surprising that changing the camera's position (to capture different views) was also infrequent. In the two cases where it was employed, it was used perfunctorily rather than expressively. Instead of introducing another point of view (as in a reverse angle shot) or revealing an additional aspect of a particular action, event or setting, the changes were made to follow a character's path around the work table. Spontaneous techniques of panning and special effects were employed a bit more frequently, with one animator (male, 10) using a pan to create a kinetic establishing shot.

Perhaps the more important point concerning technique is not how many new methods emerged relative to earlier periods, but how the basic techniques--those available to the seven to eight year olds (and to some extent five to six year olds)--simultaneously stabilized and changed. Close-up and long shots, as well as less extreme distance changes became a part of regular film vocabulary and were increasingly used throughout the film. Where seven to eight year olds used them infrequently and, therefore, generally maintained a figure ground constancy, there was now a greater figure ground flexibility. Changes in camera distance from a close-up to a long shot were coordinated with object movement, giving more fluidity to the filmic field as well as permitting better framing (i.e., inclusion or exclusion of characters/events).

However, the ability to apply technique most effectively was in large part a function of the object manipulation system's complexity. There seemed to be an inverse relationship between the intricacy of the object world and its translatability to film. When the child works with large numbers of toys, as two of these animators did (male, 9; male, 10), his task is to coordinate them meaningfully (e.g. interactive groups) firstly on the object manipulation level. While the objects themselves may be well coordinated, the next coordination--between objects and camera--is less successful and there is a corresponding drop-back in filmic representation. Product and process, which have become more convergent with age, separate in these cases: the complexity of the social world and action sequences are more apparent on the work table than in the finished film. Such disjunction was not due to a failure of movement/trigger isomorphism, but to an inability to appropriately match figure/ground relationships to object actions and to compensate for the greater number of objects by more finely articulating their movement.

Strategy in these cases was to have action occur in several different areas of the work table; however, the children would zero in on successively different portions of the total field without providing enough transitions between such shifts. Visual connectives or long shots were needed to link the various sub-areas to the whole setting so that general context of the action could be ascertained. Either such transitions were absent, or of such duration as to be disorienting.

In addition to not adequately altering the figure/ground relationship, these animators introduced their characters from different directions (sometimes right to left, sometimes left to right). It is difficult to understand the logic of action when such continuity is broken (Mascelli, The 5 C's of Cinematography). Directional continuity was not discussed on the training tape, yet all the nine to eleven year olds who worked with limited numbers of objects "instinctively" maintained it. Firth and Robson (1975) found children as young as seven years were sensitive to directional continuity and all subjects (ages seven to thirteen) had better recall for film sequences presented with it than for those without. Thus it is unlikely that directionality mistakes were made because of cognitive misunderstanding and more likely that they resulted from the difficulties encountered in translating a complex object system to film.

Working with large numbers of objects moving simultaneously also presented difficulties. In order for the eye to register all the action being shown additional time (i.e., more movements of each object) must be devoted to developing the filmic action. What seemed like smooth, comprehensible movement to the animators while making their films appeared jerky in the finished product.

All of these problems seem to indicate a higher-order replay of the fundamental confounding of subjective and objective visual fields. While the child is engaged in the process of making his film, he has the entire visual field before him; that is, his actions are part of one unified context and his visual perspective is holistic. When he points the camera at one area to the exclusion of others and correspondingly manipulates his objects, he does so having the overall visual context in mind and thus the shift in perspective is comprehensible to him. But the camera itself does not have a comprehensive view; it records only the partial actions/objects of the field selected by the animator. Bounded by his own context the animator is unable to separate that which the camera is capturing without reference to his total visual field. This does not mean that audience awareness is completely lacking, only that its parameters have somewhat shrunk. Both of these animators were, in fact, careful to bound their films with audience-orienting establishing and ending shots. Most probably further experience and feedback would ameliorate the subjectivity factor since the confusion is less of a conceptual nature at this age than a practical (experiential) one.

4. The 12-15 Year Olds.

As the preadolescents were concerned with filmic representation, we had hypothesized that they would begin to evidence concern for filmic expression and that their films would, concomitantly, constitute a new state of development. This was not, however, the case, adolescent films did not appear discontinuous with earlier animations, as a truly qualitative shift would imply (Kohlberg, 1968), but rather provided a sense of continuity with the preadolescent work. In some sense adolescent filmmaking was paradoxical. On the one hand, their films built upon the competencies of the preadolescent group, yet on the other hand their films, as a whole, were more variable in quality than would be expected.

Evidence from the filmmaking process suggested that adolescents did have a better overall understanding of film than the preadolescents, but that this eldest group was more variable in how that understanding might be practically applied. Thus the finished products ranged between very technically sophisticated films, which were often visually confusing, to technically more simplistic films, which were more coherent. Each type of film, however, contained its own logic--whether that logic was expressed via technical manipulations or through more controlled object movement. While use of technique may have been aesthetically unnecessary or antithetical to the comprehensibility of the finished film, its application was not indiscriminate. Conversely, where little or no technique was used such rejection appeared to have resulted more from a choice that it was unnecessary than from an inability to effect its execution.

Adolescent handling of time was marked by a decalage between conceptual and practical knowledge. On the most general level, they well understood the dissimilarity between actual elapsed and filmic collapsed time. Estimates of overall running time were, in fact, most correct (reduced from half an hour to several minutes) although still over-long. They recognized, too, that film time was not identical with narrative time, but required certain modifications and compensations over narrative temporal expression. And, on another level, relevant to the more specific concepts of physical time--simultaneity, velocity and durative variation (Piaget, 1969)--adolescents were able to understand more than they could or did actually execute.

Instances of intuitive parallel action, speed and temporal variations indicated that physical time was properly grasped and this was further demonstrated in the post-filmmaking exercises where twelve of the thirteen adolescents tested were able to move two characters simultaneously at different rates of speed and to expand time (by moving the character more steps and/or by clicking more times after each step). Why then the difficulty with film time? Precisely because real and reel time are not isomorphic, and past a certain point experience overtakes cognition in making the proper discrimination. The egocentric confounding of physical and psychological time is better explained in terms of task unfamiliarity requiring experience and feedback than it is by lack of appropriate cognitive operations necessitating cognitive restructuring.

This distinction between conceptual and practical understanding in turn implies a distinction between competence and performance. Adolescents knew more than they generally chose to apply and applied more than actually registered filmically; that is, temporal competence preceded temporal performance and non-apparent performance seemingly antedated the apparent. Thus competence is a conceptual category, dependent upon certain cognitive structure, while performance, although reliant upon cognitive functions, is a practical or applied category dependent on concrete experience. As with any art form, mastery of the medium's unique qualities can only be ascertained through continual self-correction based on concrete feedback.

Competence versus performance was not limited to notions of time, but cut across technical concerns as well. Adolescents were often capable of executing more techniques than they chose to use in their films and those employed were often conceptually ahead of their execution. In fact, adolescent use of technique in many ways underscored the strengths and weaknesses of their films. There was good continuity with the preadolescent group in the regularity of close-ups, long shots and variations in between, in the near ubiquity of establishing and coda shots (although written markers were for some reason rare). Reversible zooms and camera position changes were more frequent and were becoming consolidated within their general film vocabulary. Spontaneous techniques also surfaced slightly more frequently, including pans, camera cranes and special effects (e.g. changes in lighting, use of real fire, achievement of a "blurry" effect).

More important than the absolute quantitative increase in technique were the increasingly flexible ways these techniques were used (see Table 8). Close-ups and seriated zoom ins were employed not only to highlight narrative content but, in conjunction with long and medium shots, to consciously manipulate depth of field and to control framing. Thus a close-up is not only for "when you want to emphasize something about the character," but also to limit the perceptual field so "that I can change the scenery so it will look like he's getting deeper into the forest" (female, 15). Although preadolescents sometimes manipulated the zoom ring for framing effects, they did so less frequently than the adolescents and often achieved the same effect by the less sophisticated means of moving the camera and tripod backwards or forwards. Where the preadolescents also used close-ups for emphasis, what was being underscored was generally some static event or character, activity being captured via long shots. Adolescents were more variable and used close-ups to focus in on on-going events (e.g. spider in the act of terrorizing his prey) as well as to capture a "frozen" moment.

Seriated zoom outs and long shots, in a converse fashion, were used to widen the perceptual field to include portions which had been previously excluded, "so (you) can get a view of the whole forest toward which he's walking" (female, 15), or "to get people into the frame" (male, 13), "to have both of them (characters) in the picture"(male, 15).

Kinetic zooms appeared for the first time, but were not always apparent in the finished film. Adolescents did not realize that a compensation was necessary; with two things moving the eye needs more time to comprehend both movements. Manipulating the zoom ring and the object only twice--as most did--is not enough time for the eye to perceive the simultaneous movements. (This need to compensate cuts across several other technical areas: when working with larger numbers of characters, one has to compensate by more finely articulating the movements; when trying to show one character moving faster than another additional movements of both figures are required to provide a standard of comparison so that the faster moving object can be perceived against a slower moving background.) However, the fact that adolescents did attempt kinetic zooms marks the first attempt to coordinate object and optical movement.

Interestingly, the rationale of using close-ups for emphasis evidenced in our sample (nine years and older) does not correspond with empirical work regarding interest level and cinematic technique. Williams (1968) suggests that close-ups are most effectively used when visual information to be conveyed can only be communicated through a tight shot or when it is necessary to narrow the visual field to exclude extraneous information. In his view, "The close-up should be used for selection rather than reinforcement" (p. 169). Williams had a sample of twelfth graders watch a lecture which was filmed entirely in a medium shot and instructed them to push a button whenever they saw someting of interest. The lecture was then broken down into units by sentences and points of visual interest were correlated with specific sentence units. Two new films were then shot, one with close-ups at the high interest points and long shots in the low interest ones, the other in exactly the reverse relationship. The films were shown to two new samples of high school students. Results showed that close-ups were preferred for informational purposes, rather than emphatic or expressive ones. However, the material Williams' Ss rated was itself informational, not dramatic and it might, therefore, be specious to generalize that camera distance preference is the same across all content areas. If one attends specifically to glean information, then changes in camera distance may well be distracting, but if one attends for sheer enjoyment then such alterations may be engaging. Furthermore, the line between information and emphasis may be tenuous. A close-up on a figure who falls from a car may provide information relevant to the plot as well as dramatic emphasis. The rules for technique application and preference, therefore, are not absolute, but depend on the relative nature of what and to whom one is communicating.

Camera position changes, which had previously been used specifically to follow a character's trajectory were now also employed to provide new views or camera angles for particular characters or events: "I want to have a view of the front now so that I can see how the army men are set up--like a plane's view" (male, 12); "I moved the camera because I wanted to get a different angle, from behind" (male, 13). Piaget and Inhelder (1956) found that reversible front-back coordinations preceded left-right (side-to-side) ones and this was later reconfirmed by other investigators such as Minniegerode and Carey (1974). This also appeared to be the case regarding camera position changes; front-back views of characters were coordinated rather than side-to-side ones. Most probably our adolescents would have been able to correctly coordinate all perspectives, given the specificity of the Piagetian task, so that coordination of front-back to the exclusion of left-right does not necessarily indicate an inability to do so. But because these kinds of reverse angle shots appeared only at adolescence, such coordination in the filmmaking context may be more difficult and one would, therefore, expect them to begin by making the "genetically older" coordination.*

In line with efforts toward more dynamic story representation, adolescents tried to abandon static establishing and coda shots for kinetic establishing and ending sequences. While evidence of such kinetic sequences was found in the preadolescent sample (male, 10; male, 11), they were more frequent here. One film, for example, opened with an establishing sequence: from a tight still close-up of one turtle's head a direct cut was made to another still coose-up of a new character, followed by an immediate cut to a full shot which showed them both standing on a tennis court for about a second before the film's action began. Kinetic coda sequences included a few seconds of a moving line of cars (female, 14), a reverse pan back across a desolate barnyard (male, 15), a moving spider in the extreme foreground (placed on the camera's lens) against an empty house in the background (female, 13).

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* Those cases where Ss took the camera to all four places around the table in a circular manner are not included here because this did not so much coordinate different perspectives as much as follow a single perspective of an already developed action.

Adolescent variety in technical as well as object manipulation points toward a growing set of representational possibilities. Yet this expansion was by no means a unilateral one and was mitigated by motivational problems. The objects presented to these animators were somewhat alienating; they were, after all, originally chosen to interest five to six year olds, and the expressive possibilities they offered were limited. This plus the general tediousness involved in making an animation depressed interest level in the task and several adolescents admitted that they found the procedure boring. Consequently, they executed their films rather quickly, not bothering to develop or elaborate the action as fully as they could have.

Interestingly, motivational level cut primarily across gender lines; girls found the task more satisfying and spent a longer amount of time making their films than the boys. Post-task responses reflected this bias, too. All of the boys who saw their finished films were disappointed, while all of the girls were thrilled. Reaction seemingly had little to do with overall comprehensibility of the film so much as mastery of the technical medium. Boys considered the short running time and lack of perfectly smooth movement as some sort of reflection on their ability to handle a piece of machinery. Girls, who were not used to handling such equipment, were delighted that they were able to effect anything at all, and were pleased with their films even if they were thematically difficult to understand.*

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* Films from females, in fact, ran almost twice as long as those from males, with a mean running time of 63.6 and 36.1 seconds, respectively. This is an interesting reversal from the nine to eleven year old group. While both preadolescent and adolescent films had a similar mean running time, in the younger group it was the boys' films which were substantially longer than the girls' (70.1 versus 45.0 seconds, respectively).

CHAPTER VII

THE ANIMATION STUDY: FILM AS THE MEETING PLACE OF MULTIPLE CODES

What we have shown to this point with the study of the five codes separately (narrative, object, space, movement and film technique) is that each one is remarkably complex and that all are in their various ways relevant to the production of films. In Chapters II and III it was illustrated how complex and tedious was the process of learning how to make films. What we have now illustrated are at least some of the complex microprocesses that in their turn underly those learning accomplishments.

Putting it broadly, we can say that in this study the film making of the youngest children (five to six years) is dominated by object manipulation, of the next group (seven to eight years) by their concern for narrative control, of the nine to eleven year old group by their mastery of movement and space for purposes of representation, and of the oldest group (twelve to fifteen years) by the integration of all of these with film technique.

In this chapter we wish to focus not so much on the age level dominance of particular codes as upon the integration that is achieved across all of them at a given age level. In short, if film making is the meeting place of multiple codes, then how do they meet? We begin first with the consideration of the role of technique in such integration and then attempt to follow the implications of Kjörup for this body of work.

Interrelationship of Technique and Other Codes

We wish now to consider the interrelationships of technique to the other codes and to show that technique as such is not alone the capping stone of the film endeavor.

What we mean by technique and by its interrelationships with the other codes will change with age. In Table 10, for example, Zarum has set forth some of the age changes that occur in the use of the same technique. Clearly structure does not necessarily predispose function, as these examples indicate.

Table 10

Use of Techniques: An Hierarchy of Strategies

Technique	Age of First Occurrence
A. Stillness	
1. Arbitrarily	5
2. To indicate dialogue or planning between characters	6
3. To show an event (e.g. "looking around")	6-7
4. Establishing and/or end shot and/or markers	7
5. Passage of time, duration of some event (e.g. "waiting for the ferry")	7
6. Emphasize some event (e.g. "horse is shocked by sight of the spider")	10
7. Intra-scenically with camera position change to re-establish setting	10
8. Inter-scenically to re-establish (new) setting	11
9. Varied in different places within film to alter duration of particular events	12
B. Close-up	
1. Arbitrarily	5
2. Periodic emphasis on specific parts of film not necessarily crucial to narrative	7
3. Specifically to emphasize crucial narrative sections	9
4. For framing purposes, to narrow the realm of inclusion	10
5. Special effects (e.g. character placed against camera's lens to look scary)	13
6. Mode of characterization (e.g. spider always introduced with close-up)	14
C. Far-Aways (Long Shots)	
1. Arbitrarily	5
2. To include all of a scene	6-7
3. In conjunction with close-ups and medium shots for framing purposes (e.g. "I'm going to make it go far away because (else) I won't have enough room for the ambulance to turn.")	10

D. Seriated Zoom In and/or Zoom Out

1.	Arbitrarily	5
2.	Focus in gradually on character and/or setting for attention or emphasis	10
3.	Focus in or out gradually for framing (inclusion/exclusion) purposes	10
4.	As technique to effect transition between narrative divisions (e.g. between equilibrium and disequilibrium, between countervailing force and resolve)	15

E. Camera Position Change

1.	Arbitrarily	5
2.	Follow character's action either around the table or from a particular perspective (e.g. face front)	10
3.	To give another viewpoint	12

F. Pan

1.	Follow actions of a character from one place to another (right/left)	8
2.	Survey a static scene or character (up/down)	8
3.	Serve as opening and/or end shot	10
4.	Serve as a means of transition between narrative sections	12

G. Movement Path and Strategies

1.	Arbitrarily	5
2.	To express plot line	7
3.	Intra-object activity	10
4.	Affect	11
5.	For differences between characters (e.g. different rates of speed between figures; different types of movement between same or different figures)	13
6.	Toward expression (where movement pattern tells you something about the nature of the character or situation)	13

The above list of varying uses for the same film technique shows that structural complexity is not isomorphic with quantitative use of technique. Technical manipulations can be inimical or irrelevant to the film's overall communicability. It is not so much the presence or absence of technique, therefore, as the appropriateness and logic of its application which is relevant. For purposes of evaluating these films technique should not be seen as the sina qua non of filmmaking, but as a set of possibilities, as a growing vocabulary which may or may not should or should not, be employed. When we compare a film of an adolescent with that of a younger child and see a preponderance of technique in the former and an absence in the latter we cannot conclude that the technically sophisticated film is "better." Conversely, a technically complex film from a younger child cannot automatically be deemed as better than a technically simplistic film by an adolescent. We may hypothesize that more technical manipulations represent a greater film vocabulary, but words must be used properly in order to render meaning and, therefore, a more adequate way of dealing with this problem is to look at how the technique(s) is employed and the seeming logic behind its use.

Table 10 illustrates how the use of individual techniques appeared to evolve and, more importantly, how the use of the same technique became increasingly differentiated with age and thus more flexible. While children as young as five or six are capable of executing close-ups, long shots, seriated zoom in/outs and camera position changes, their function is not the same as when applied by older animators. A close-up, for example, begins by being employed arbitrarily for no ostensible purpose (five to six year olds) and ends by being used for a variety of functions (narrative emphasis, framing and dramatic effects) by nine to fifteen year olds. As the ability to represent narrative elements in film increases, so does technique tend to be used in more and more of the narrative segments to accentuate filmic action. Thus from an occasional close-up in n'importe quoi part of the narrative, close-ups are applied to specific story divisions (disequilibrating events, countervailing forces, etc.). A film by a five year old illuminates only one section of the narrative, disequilibrium, and there is no technique used at all. By eight years more elements of the narrative emerge and a close-up is appropriately applied in the resolve. At ten years, all the narrative elements are delineated and punctuated by specific techniques.

With age there also appears to emerge a pattern of technique employment throughout the film. In a story about a farm attack, for example (male, 10), we get a pattern of close-up and long shot, close-up and long shot almost throughout the entire film. Every countervailing force (army, indians, airplanes, etc.) is introduced with a close-up--the animator is telling us, "Look, someone's coming to help"--and followed by a cut back to a longer shot so that we can see the space and military situation in which they're operating. Although the film is extremely jumpy and the action difficult to follow, one can see that technique was applied in a logical, non-arbitrary manner. In a film about a spider's attack (male, 14) a close-up is employed every time that the spider is in view "to show that he's coming." The beginning of filmic expression surfaces, too, when after a seriated zoom in a single cut back to a long shot is executed "to make it look more dramatic."

Specific techniques are also used to effect transitions between the narrative elements as well as to highlight them. We have a film about a fire (female, 12) which opens with a kinetic long shot of a burning house. After the disequilibrium is established a pan is made to the firehouse (in another space) and a seriated zoom in done on the firetruck emerging from the house which tells us, "the firemen realize what's happening" (recognition of disequilibrium). Another pan connects this recognition to the countervailing action as the camera follows the firemen's approach to the burning house. Long shots of the fire continue until the firemen rescue a wounded man, then a seriated close-up focuses our attention on the man's condition. Countervailing action is connected to the resolve through use of another pan, as we see the firetruck head away from the fire. And lastly another pan is used to finish the resolve as the camera goes from the firehouse back to the now desolate building.

Other techniques are used to effect such transition, too: seriated zooms, singly or in conjunction with camera position changes; cuts to new characters and places; and cuts to written titles linking the ongoing action.

As all of these examples illustrate, technique is not an isolated concern divorced from narrative content or the object being manipulated. The relationship is,

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

in fact, a complex and interactive one. Technique severed from narrative content is distracting and irrelevant, but technique tied to narrative content is not always visually pleasing or successful. Technique which does not account or compensate for object manipulation may not be evident in the final film and object manipulation itself may or may not depend on technique for further clarification.

Film as a Meeting Place of Codes

For purposes of clarity we have talked of codes for:

Narrative
Objects
Movement
Space
Film Technique.

Kjörup (1977), in his presentation, sees film as composed of codes for:

Representation
Movement
Composition
Montage.

Each of these codes he says is a "system of rules which make certain entities count as, that is, mean something" (p. 38). Taking as an example of what Kjörup calls the montage code, we have:

> One rule is that a close shot of a man looking, followed by a close-up of something else means that the man is looking at whatever is represented in the second shot . . . Another rule is that a close-up of a man thinking, dissolving into a shot of something else, means that the man is thinking of whatever the second shot shows. (p. 33)

From this exmmple, and following Kjörup, we can say that each code is composed of executive rules and interpretive rules. There are rules to tell you what to do (take a close-up) and rules to tell you what it means (we are looking at that person). In addition, each of these rules varies to the extent that it was explicit or implicit in the training tape. Thus, in each code we must deal with:

execution ⟨ explicit / implicit

interpretation ⟨ explicit / implicit

Combining the codes we have already described with the more general categories of Kjørup means that: (1) the code for representation includes what we have called the narrative code; (2) the code for composition includes what we have called the spatial code; (3) the code for movement includes what we have called the object manipulation and movement codes; and (4) the code for montage is included in what we have called the technical code.

Clearly if we were dealing with adults and not children many other matters might be involved, but at this time this synthesis appears to do sufficient justice to the codes we have used which have a child centered character to them and to the more general considerations of Kjørup. We deal with each in turn.

I. The Representational Code.

First of all, as we have seen, this implies acquaintance with the narrative code. In our work, executive and interpretive rules for the narrative code are combined,as narrative skills were assumed, not taught, and, in fact, served as the basis for the filmmaking process which followed. Most generally, the narrative code consists of a series of rules for the construction and ordering of particular events or actions which can be seen in terms of the several narrative elements previously discussed (Todorov's scheme,etc.).

But this was only one part of the representational task required of these children. More generally the representational code deals with the rules which regulate the symbolic use of objects and pertaining to this particular study it may be discussed as follows. There were:

1. Executive Rules

A. Explicit: The primary rule here was that children were specifically told, "tell me a story with these objects which will serve as the basis of your film." Thus objects that the child chose to relate his story about were those to be used in the film to represent those characters. The rule meant that the objects were the symbolic bridge joining the verbal and visual expressive modes.

B. Implicit: Auxiliary objects may be chosen to represent story characters or actions as deemed necessary in the translation between expressive modes.

2. Interpretive Rules

A. Implicit: Size of the objects relative to each other specifies their relationship (i.e., spider is menacing because it is much larger than the other objects).

Each character chosen has a specific role or function to play in the final film. That is, the objects chosen do not represent random figures who will act arbitrarily, but specific figures whose movements will be integral to the plot.

II. The Compositional/Spatial Code.

This code consists of rules for the general composition of the frame or shot, as well as rules for use and creation of spatial relationships.

1. Executive Rules

A. Explicit: The primary rule here concerns framing. Children were told and shown how to manipulate the camera so as "to get all the scenery and characters in." The idea here was to properly compose the frame so that a general filmic illusion could be maintained.

B. Implicit: More than one spatial area may be employed in any particular film, including single segmented, double and multi-spaces and/or separate scenes.

2. Interpretive Rules

A. Implicit: Relative placement of figures from ground specifies the relationship of the characters to the set (e.g. they are far away from home, close to home, approaching home) and to each other (e.g. characters placed close together have a different relationship to each other than those placed further away).

Use of another spatial area signifies a new narrative place and means that there is some kind of shift in the narrative action.

III. The Movement Code.

Rules within this rubric refer to the patterns and strategies employed in effecting object movement.

1. Executive Rules

A. Explicit: The primary rule here was "move your object slightly and click four times after every position change."

The secondary rule dealt with stillness: "Use 24 clicks for every second of stillness desired." Different amounts of stillness were demonstrated (one to five seconds).

Auxiliary rules dealt with how to:
Work with more than one character at a time;
Move the characters either successively or simultaneously;
Make them move in different directions (one behind the other--one-way vertical--away from each other);
How to make one character disappear and reappear someplace else.

B. Implicit: Auxiliary rules for variations in basic directionality of movement: up/down, in-air, backwards, meeting, in place and coordinate paths, and their single or multiple use in any one particular film.

Additional rules for object strategies: intra-object kinesis, action/reaction, causality, parallel action.

Variations in primary object movement rule, which allowed speed and/or temporal alterations to occur. Objects could be moved in smaller/larger steps, the trigger pressed less/more times per move, or both gradation and registration differences combined.

2. Interpretive Rules

A. Implicit: Object movement signifies something; the manner in which characters are manipulated tells us something.

Some of the rules within this category are:
Characters which move successively in a horizontal line mean that they are following a leader;
Two characters which move simultaneously or successively in the same direction are participants in some mutual activity;
Characters which back away from each other simultaneously are in opposition to each other;
Characters which do not move, or have stopped moving, have a different relationship to the rest of the moving characters or a different relationship to each other than they had while moving;
Objects which move slightly in place or orient to each other are involved in a conversation;
Changing movement patterns (distances) between two characters signifies a changed relationship between them;
Characters which change their speed of movement are in a new situation;
Different groups of characters which move at the same time signify that two different sets of action are occurring simultaneously;

Note: These are general rules, which may well vary depending upon the context created by the individual animator.

IV. The Technical Code (including Montage).

Concerns here deal with the application and use of technical factors.

1. Executive Rules

   A. Explicit: The most basic rule here overlapped with the primary object manipulation rule: "move an object slightly and click four times."

   Secondary rules dealt with execution of:
   Seriated zoom in/out: "turn the (zoom) ring slightly and click eight times after every turn";
   Camera position change: "lift the camera and tripod and carry it to another side of the table and then reset."

   B. Implicit: Close-up or long shot, that is, variation in camera distance. This was implied from the demonstrations of seriated zoom ins and outs, respectively.

   Use of stillness to establish a set in the beginning of a film, and to re-establish a set after a camera position change were demonstrated in the training film, but not discussed.

   Spontaneous techniques of pans and camera cranes were not mentioned or illustrated, but their execution figured out by some animators.

2. Interpretive Rules

   A. Explicit: Use a seriated zoom when "you want to get closer to your character," and a seriated zoom out when you want "to show the character and the whole setting." This was illustrated in stages so that relative closeness and distance were discussed.

   Change camera position to see another point of view: "First we see Cookie Monster and the little boy from the front of the house, then from the back."

   B. Implicit: Use a close-up when you want to get closer to your figure or some action; use a long shot when you want to move further away.

   Close-ups signify emphasis on some crucial aspect(s) of the narrative action.

   Close-ups signify special effects or attempt to characterize some particular figure.

   Note: For the sake of brevity, the reader is referred to Table 10 for a listing of the various interpretive rules for both taught and spontaneous techniques.

This breakdown is ideal, treating each code as a separate entity in its own context. In actuality, however, they function both alone and in conjunction with each other. Although it is important to understand the multiple components of each code, the unique nature of film cannot be grasped until the interaction of these codes is elucidated.

How these codes function both independently and interactively can best be discussed by an example. Looking at an animation from a fifteen year old male, we begin with the narrative code:

> The spider will crawl along. And he's going to eat all the animals. He's going to crawl in and out of the barn. Later, he can crawl along through or under the lake and he can attack the army.

The story outline contains one explicit and one implicit narrative element--the disequilibrating event and the countervailing force, respectively. In conjunction with the compositional code, however, the narrative elements of equilibrium, recognition of disequilibrium and resolve will also be elaborated, as will the countervailing force. Thus before the spider's attack, the representational code objectifies "the animals" while the compositional code specifies their setting--a tranquil barnyard. The farm animals are all placed outside of the barn and are bounded by a corral; this visual image tells us that the animals constitute a single, unified group and visually reinforces the idea of their common lot (as prey). Additionally, the visual set establishes a sense of equilibrium prior to the spider's entry which provides a contrast to the subsequent disequilibrating event, thereby sharpening the narrative tension.

Movement codes join those of the narrative, representational and compositional/spatial by firstly enabling development of the story line to occur and secondly by elaborating it. How does the spider upset the bucolic farmyard? How does he move against the animals? How do they react? Movement serves to develop the relationship between the attacker and his prey; the spider gets all the animals without much effort except for one ram who desperately tries to escape the spider's voracious clutches. Notice here the expansion from the narrative: the disequilibrating event was only that the spider attacked the animals, but the actual film illustrates (represents) that someone tried to flee which, besides detailing the recognition of disequilibrium, visually emphasizes the very concept of the disequilibrating event (malevolence). The compositional and spatial code, too, interacts with the movement code: to show the ram's attempted flight, he is moved so as to create a sense of distance between the spider and himself; it is this distance, in fact, that tells us that the creature is running away. And, conversely, it is the shrinkage in distance between the two that signals the spider's eventual triumph over the ram.

The movement code also provides a transition between story sections. The spider leaves the barnyard and enters a new space where the army stands ready to attack. The direction of the spider's movement changes from a vertical and up/down pattern in the barnyard space to a horizontal movement path toward the new area. This directional shift visually signals the completion of one sequence of actions and the commencement of another. The spider's rate of speed is also manipulated (though not apparent in the finished film) as he traverses between spaces: he crawls slowly away from the barnyard area until the army is in view and then quickens his pace for the attack. The animator's intent in so varying the operatory movement code is, once again, to emphasize the spider's malfeasance. Most tellingly, this entire sequence of behaviors was not included in the original narrative structure.

Witness, too, how a second space is elaborated through the compositional and spatial code. A new place emerges for the seat of the countervailing force which not only visually delineates the setting for the heretofore only implied counterattack, but reinforces the temporal separation between the disequilibrating and countervailing events. And, once more, spatial placement of the army tells us to consider its component members as one integral unit in opposition to the spider.

The technical code, via the use of a long shot and opening stillness consolidate the sense of quilibrium created by the compositional code. This is further elaborated when a seriated zoom in to a close-up and circular pan (!) of the barnyard animals is made, focusing our attention on the peaceful state of affairs prior to the spider's arrival and to the solidarity of the farm animals as a group. The spider is introduced into the barnyard area gradually, with a riveting close-up and then variations in camera distance follow to provide the necessary visual space to perceive the spider's nefarious actions. Filmic narrative tension is increased by the use of an in-camera cut to dramatize the ram's demise. We see the spider sitting on the roof of the barn surveying the ram's (futile) efforts to escape and then suddenly, via a cut, we get a close-up of the spider atop the ram and then . . . no ram at all. With all of the animals devoured, a pan follows the spider's departure from the barnyard to the lake area. A long shot reveals the army ready to attack and a kinetic close-up details the spider's eventual victory over the army. The countervailing force, therefore, was accorded further elucidation as a result of technical emphasis. Another long shot captures the victorious spider quenching his consuming thirst by the lake until, due to "indigestion," he turns over and dies while a final reverse pan from the lake to the branyard marks the total desolation wrecked by the spider and signals the film's resolve. Thus, through the elaboration and intersection of multiple codes, a thematic unity arises.

In any particular film the relative contribution and strength of each code is variable. Animators may develop one of two codes at the expense of the others and the factors influencing their choice(s) are themselves several: conceptual understanding, contextual relevance, task motivation, etc. Then, too, emergence and use of the codes is developmental and such development is neither equal nor unilateral across codes.

As each code is an amalgamation of rules, the primary factor in determining if a code exists at all is to ascertain whether the filmmaking behaviors evident constitute rule systems at both executive and interpretive levels. It seems useful at this point to reanalyze the children's films in age level terms using this new tool, and specifically focusing on the interaction between the codes.

1. The 5-6 Year Olds.

Our five to six year olds displayed little rule-governed behavior and their actions in all but the object manipulation and perhaps narrative code were unsystematic. Although they were able to communicate a story employing conventional narrative form, they were unable to effect the first transition between verbal and visual expression via the representational code. The required isomorphism in object choice between narrative and film was not adhered to. Children either did not choose the same characters for making their films as they chose to tell their stories about, or chose objects of only partial similarity. In either case, the new objects rarely represented a story character in the sense that we could understand that some character (filmic focus) or some action (thematic content) was being represented.

The compositional/spatial code, with its rule to separate figure from ground and to establish that separation through introductory stillness was generally not followed, nor was the explicit rule regarding proper framing followed. The interpretive rule that spatial placement should specify the relationships between characters was not applied, as objects were most usually placed in an indistinguishable gathering(s).

In an analogous manner, the basic executive rule for movement was either sporadically obeyed or completely ignored. If movement was discernable, objects always moved successively and never in a reversible fashion. Thus rules for how to interpret that movement were equally non-apparent as objects did not appear to be going anywhere or doing anything (e.g. no narrative-spatial home-away-home movement).

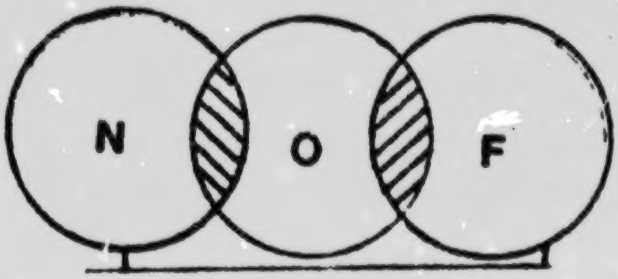
Technical manipulations did occur, but they were not rule governed in either execution or interpretation. A seriated zoom in/out was, for example, found as early as six years, but the animator clicked only once, instead of eight times, after each turn of the zoom ring and the zoom did not appear to serve any informational or expressive purposes.

Lastly, interaction between these "codes" is limited. For purposes of conciseness and to bring this material within the overall framework already developed, we can collapse the five separate codes into a tripartite system. The narrative code remains the same, as does the technical except for a name change (filmic system), but the representational and compositional/spatial codes are subsumed under a more inclusive object system. As the schematic below indicates, the filmic (technical) system does not capture narrative action, but seemingly "arbitrary" movements of objects which may or may not correspond to those specified in the narrative system.

Figure 7

Intersection of Systems: Tripartite Scheme

(5-6 Year Olds)



No Intersection

Given that these children are not yet concrete operational, their inability to understand and properly employ the rules is not surprising. Filmmaking rules are patterns of action which have been consensually agreed upon as particular means of social communication. Move an object slightly, click four times--is not an arbitrary dictum designed to perpetuate tedium, but a pattern which will enable object movement to appear clearly on the finished film and mean, signify, something. Analogously, the more interpretive movement rule that characters which back away from each other are in opposition is based on a consensual understanding that this is one means of expressing conflict between people. Youngsters of this age do not understand either the practical or social logic behind the rules; for them rules are simply injunctions which emanate from authority figures. As Piaget (1965) pointed out when he studied children's understanding and acquisition of the rules, children under seven years may try to imitate the rules they have been told about or perceived themselves not because they understand them, but because they see the source of those rules in absolutistic adult authority. Yet these imitations are doomed to be imperfect because the child cannot grasp the logic behind them. In fact, if we substitute filmmaking rules for those of the marble game, Piaget's observations of three to five year olds at play are remarkably similar to the behaviors of our five to six year olds:

> . . . the child of three to five years old will discover . . . that in order to play the game one must trace a square, put marbles inside it, try to expel the marbles from the square by hitting them with another marble . . . and so on. But though he imitates what he observes and believes in perfect good faith that he is playing like the others, the child thinks nothing at first but of utilizing these new acquisitions for himself. He plays in an individual manner with material that is social. (Piaget, 1965, p. 37)

2. The 7-8 Year Olds.

Filmmaking as the intersection of rule-governed executive codes begins at seven to eight years, and it seems that such executive rules are ontogenetically prior to more interpretive ones. The narrative code was well established and via the representational the filmic action now represented the narrative characters.

The compositional/spatial code is employed so that figures are correctly located in space (i.e., figure differentiated from ground), although the clarity of the individual shot was still marred by framing errors. There was, however, attention paid to the interpretive side of the compositional/spatial code as placement of characters relative to one another did signify some kind of relationship between them (e.g. two characters standing next to one another are friends). Of course the representational code influences the relationship, too; two dogs standing side by side do not visually connote the same relationship as a small dog and a menacing spider.

The object code was now established with a strict adherence to its primary rule of trigger press/movement isomorphism. Reversible paths of movement emerged, too, which linked object actions to the general narrative and compositional/spatial code (home-away-home). Interpretive compositional/spatial codes interact with the object movement codes as the relationship between characters first specified by the former code found continued and expanded expression through the latter (e.g. two characters which seem like friends because they're placed together probably are friends if they move together and engage in some mutual action).

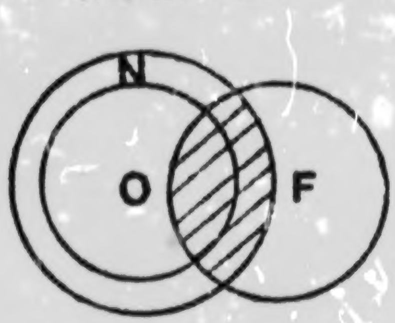
Camera manipulations, in addition to capturing all the object movement, sometimes punctuated the action with a close-up or long shot. However, interpretive rules for technical concerns were only vaguely articulated; close-ups were not always employed to emphasize narrative content and their overall quantitative appearance was infrequent.

In contrast to the non-interactive relations between systems found among the five to six year olds, those for the seven to eight year olds were mutually influential. Using our tripartite scheme, it can be seen that the object system was subsumed by the narrative. Character choice and actions were exactly those specified in the narrative, no more, no less. While the filmic system captured the narrative and object actions, it did not really elucidate them in specifically cinematic terms.

Figure 8

Intersection of Systems: Tripartite Scheme

(7-8 Year Olds)



Strict observance of the general operative rules was again parallel to the behavior Piaget found common in his six to eight year olds. The child between these ages "regards the rules of the game as sacred and untouchable; he refuses to alter these rules and claims that any modification, even if accepted would be wrong" (1965, p. 54). This phenomenon was strikingly clear in the additive behavior one eight year old boy employed. The rules behind every technical move were perceived as inviolate. If one was going to do two things at the same time--a close-up and a second of stillness--the number of clicks for these behaviors had to be combined. Understanding the nature of the rule--why one should shoot more times for a close-up than a regular movement pattern, or what 24 clicks signified in terms of film time--were not understood. Instead, each action was kept separate and treated as an individual link in a broader film chain. In such cases as these the rules were clung to precisely because their necessity/logic is still imperfectly understood.

3. The 9-11 Year Olds.

Films from children between nine and eleven years increased in complexity within and among particular codes, regarding interpretive rules. The fact that film was becoming recognized as a medium of communication between filmmaker and audience brought with it a new relationship among the several codes.

The representation code was now amplified through the use of objects which were not specifically mentioned in the narrative. The rule, therefore, was no longer to create an absolute correspondence in quantity, but a correspondence in quality. This, of course, reflects back on the narrative code, externalizing characters and scenery which were only previously implied in the verbal story and created a greater visual sense of realism. These auxiliary objects were well coordinated according to operatory compositional and spatial demands and the framing rule was better adhered to so that a fairly good filmic illusion could be sustained.

Using the primary object manipulation rule, movement paths and strategies were extended to include circular, backward, segmented-in-air paths and intra-object kinesis. These extensions, in turn, enhanced the narrative while at the same time further illuminated the representational code (since what was being represented via the objects became clearer through the more differentiated movement patterns). New interpretive rules regarding movement emerged as the result of gradual entrance and exit of characters and intra-group coordination. Bringing a character gradually into a scene generally meant that a new action was able to begin or that a new figure would be incorporated into the on-going action, concomitantly allowing for a temporal interval (more realistic passage of time) between the old and new actions. Conversely, removing a character slowly generally signified that the action had been completed and permitted some temporal interlude before occurrence of the next event. Creation of permeable sub-groups through object movement, although more apparent in the process than the product, did signify a new set of relationships among the basic characters. Seeing the army men divided and moving in different places meant that they were not to be treated as an indivisible entity, but as two separate groups with different, specific functions to play in the narrative action.

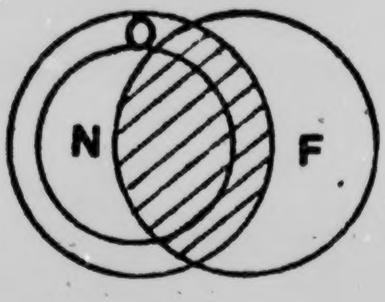
Development of interpretive rules also occurred within the technical code. Basic rules for the execution of each technique were followed, but the function of each technique became more differentiated. Stillness, for example, not only meant that the film was beginning/ending, but also that a particular scene or section was beginning/ending, or that some event should be well noted by the viewer. Close-ups very definitely came to mean that certain characters and events were deserving of special emphasis. As the representational, compositional and spatial, and movement codes enabled elaboration of more narrative elements, close-ups and long shots increasingly punctuated those elements and thus their application grew both quantitatively and qualitatively. Camera-cuts, used by even the youngest children, now signified a shift of attention within a particular action sequence or between two sequences. Instead of radically directing our attention to a new place and action which did not seem relevant to the overall thematic development, these cuts were used to abet narrative continuity.

Referring again to the tripartite scheme, the relationship between the systems has become interactive. The filmic system has increased in size over that available to the seven to eight year olds and intersects with a greater portion of the narrative and object systems. But the relationship of the narrative to the object system is reversed from that of the seven to eight year olds because object employment and manipulation expanded the narrative system.

Figure 9

Intersection of Systems: Tripartite Scheme

(9-11 Year Olds)



4. The 12-15 Year Olds.

Adolescents continued in the same manner as the preadolescents and the intersection of codes proceeded toward the culmination described in the example of the farm attack. The major variation from the preadolescent group was an alterability in the executive rules themselves. Movement and stillness rules were consciously transformed to achieve different visual effects which, in turn, became aligned with new interpretive rules. Less clicks per object movement meant that a character went faster, more than he went slower; each variation signified a new relationship of the character(s) to the ongoing action.

Such variability of rule-governed behavior displayed by the adolescents resembled the actions of the eldest children in Piaget's sample. After ten to eleven years children admitted that rules of the marble game could be changed if there was agreement amongst all the players beforehand. Thus, the social nature of rules was perceived; rules are more a means to the end of group communication than an end in themselves. Altering an executive filmmaking rule may not appear on first glance to have social ramifications, but it does. Understanding the logic behind the general movement rule--how and what it communicates--makes it possible to alter that rule to communicate something else. The filmmaking process is an ultimately social one because all the filmmaker's action should be geared to creating a realm of meaning for an audience-other.

In some sense, then, what we are dealing with here are patterns of socialization; that is, the way in which chidlren increasingly come to adopt conventional standards of expression. What makes the younger films so difficult to comprehend is not that the child, in fact, acts arbitrarily, but that his rule systems do not correspond to ours. Indeed, as all of Piaget's work so clearly illustrates, the young child has a logic of his own--one which is qualitatively different than the adult's. Because the youngster lacks a realization (coordination) of the shared meaning upon which communication rests, communication for him must be a private affair. From the Piagetian perspective, rule-governed behavior is the result, not the cause, of the development of underlying cognitive structures. As higher levels of cognitive structures emerge the child possesses the requisite operations (and desire) to deal with the more in a more adaptable fashion, that is, to coordinate different social perspectives and to understand the basis behind conventions and norms.

The older children were not only aware that film was a medium of communication, but increasingly adopted reciprocally shared ways of speaking in that medium. Their emphasis and concern for greater realism was indicative of their reliance on shared meanings for the very expression of what that greater "reality" was. What, for example, does causality mean and how do we interpret it as causality? For adults, causality means that two events are connected to each other such that the former influences the latter in a specifiable, predictable manner. In a film, we interpret an event as causal when we perceive one series of actions influencing or altering another in a specifiable manner. For younger children, the very conception of causality is more subjective and when translated to film this subjectivity dictates its expression. In one film by a six year old we see a house disappear. To this animator this was supposed to signify that a storm had demolished the building. But cause and effect were not specified; we saw no storm, nor destruction of the house. Moreover, disappearance in a film signifies many different things. On what basis are we to assume that it meant destruction? By contrast, in a film by a twelve year old we see a house burning. Firemen arrive, point a hose at the fire and the fire gradually diminishes until it's completely extinguished. Here the connection between cause and effect is clear and devoid of ambiguity. The hose signifies that something is being done about the fire, and the longer it remained aimed at the blaze the more the fire abates. Thus, via the representational, compositional/spatial and movement codes, the connection between hose and fire accords with conventional means of expressing and interpreting causality.

The rules by which we express our shared beliefs and ideas are not, however, static entities. Just as our conceptions of what reality is changes somewhat over historical periods, so too do the rule systems of communicating that reality undergo transformation. Executive and interpretive rules of filmmaking developed along with the historical evolution of the medium and demanded in response a learning process on the part of the audience.

Conclusion to the Animation Study (Chapters IV - VII)

In the earlier chapters (II and III) we looked at the filmmaking process from the outside and saw a long winded and at times both tedious and exciting relationship between teacher and student. In these chapters we have looked more internally at the processes within the child as creator. We were able to do this because we attempted to standardize the teacher-child relationship by putting it on videotape. As our results show, however, the real teacher (Sarah Zarem) had effects differentially on the sexes not unlike those that Susan Zeig had on the sexes in the P.S. 3 study. Our standardization was apparently only partially successful. Learning to make films is such a complex process that young students do need a close and helpful relationship and are differentially effected by it, no matter how standard it is.

Still, by taking that relationship somewhat for granted we have been able to focus on the children's responses to this fairly standard situation. What has been revealed are at least some of the critical strands that go into the process of film-making from the youngsters' perspectives. What we have here is a developmental psychology of animation rather than an account of animation as such. But it is a different kind of insight and does reveal many of the difficulties that younger children have in carrying out the injunctions of a book like Young Animators. How can those who do not know how to convert words to pictures, or unite character and spatial differentiation, or know how to make objects show movement, realize the objectives of animation? We have shown that our five to six year olds could manage little but object manipulation, that our seven to eight year olds could manage the narrative but had a very restricted spatial and movement control through which to mediate the narrative in a representational way, though they attempted to do this. By nine to eleven, however, there was a fair grasp of the way to mesh verbal and visual codes, the way to use object movement, narrative and configuration for a communicative purpose. From twelve to fifteen, moreover, there was a wider array of film technique usage as well as more sophisticated movement and spatial deployments. Although we have not sought to express each of these developments quantitatively, the various tables presented of the presence or absence of these characteristics would permit such a statement of relative degrees of code acquisition for each age group.

As our interpretations have shown the data runs quite parallel to the findings of Piaget who is the psychologist who has dealt most comprehensively with the kind of child-to-object relationships that have been a key to our analysis. As far as the study goes it exemplifies in yet another area the pervasive usefulness of the concepts developed by Piaget. But as we have mentioned in the introduction, this must not be taken to mean that the limits Piaget found on children's cognition by age and the parallel limits that we have found therefore imply that all children in all circumstances are similarly so limited. Piagetian testing situations are by and large fairly artificial experiences for children, just as was our own film teaching "standardized" situation. So the parallel means only that children tend to show this sequence of competences in these kinds of situations. As children often find themselves in these kinds of situations (as, for example, in schooling), however, nor are these findings irrelevant to much that they will encounter.

Still, as most filmmakers would hurry to tell us,* film teaching that does not proceed from the first film to a second film (after the feedback from the first) is hardly teaching at all. It remains an open question therefore whether the limits that we have described on childrens' capacities are of a relatively unmodifiable cognitive kind, as Piaget might assert, or are just due to insufficient teaching. Recent data suggests that Piagetian norms and expectancies are sometimes and in some circumstances drastically modifiable (Gelman, 1978), so there is considerable hope for those who would work intensively with very young children that given time, care, patience and attention they could rise to greater heights than was shown to be the case in this study. Though it would follow that where the teaching was more or less chucked at the children (as in the usual school situation) the results might well follow those indicated here. We did have the opportunity to view the animation films of a four year old young filmmaker, whose father and mother were both artists and filmmakers and had been practicing their joint crafts in his presence from the earliest age. The child was a kind of Mozart of animation and showed that in these intensive and intimate circumstances that art of a very high order was possible.

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* And at a conference of film teachers at Lake Minnewaska in New York in 1977, after seeing our animation films, they did hurry to tell us.

What this all comes down to is that we have pointed a finger to some of the underlying competences that go into animation filmmaking and have arrived at a hypothetical sequence in which these might well occur. The elaboration of such understanding means that those who teach children can focus their attention on the underlying competences of an object, narrative, movement and spatial sort that the learners need to have made clear to them. Teaching film technique alone is probably not the only or most efficient way to go about the task.

CHAPTER VIII

THE WORKSHOP

This chapter* will provide an account of life in the workshops on Ludlow Street and Henry Street. A full understanding of the situation requires some knowledge of the history of the workshop prior to the initiation of the study in the Fall of 1974. Rudger Larsen had begun teaching film making to children as early as the mid-1960's. His work, however, was almost exclusively with high school aged adolescents and had used 16mm film equipment. The notion of a Super-8 workshop for the younger children developed as a result of the observation by Rodger and by Sheila Page, Rodger's assistant, that the young neighborhood children were fascinated by what was going on in the 16mm workshop and were constantly under foot. Sheila was a Radcliff graduate who was doing volunteer work to get experience with film and with children. She and another Young Filmakers' alumnus subsequently founded Women Make Movies, Inc., a feminist film collective which is still very active. In the Fall of 1969 some Super-8 equipment was acquired and Sheila began working with some of the children who had shown continuing interest. As this effort proved fruitful, Sheila, Rodger, Lynne Hofer and Jaime Barrios spent much of 1970 applying for funds and setting up a workshop in a new location specifically for the younger children.

Through the ensuing years the workshop continued to be dependent on Rodger, _et al_. for fund raising, administration and over-all guidance, but was not generally the primary focus of the Young Filmakers' organization. Although Rodger, Lynne and Jaime continued to feel a commitment to teaching children, the realities of changing emphases in governmental and foundation grant giving dictated a shift in emphasis to work with adults of various types.

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* As seen through the eyes of Frank Eadie.

The motivation for starting the workshop was certainly compatible with Rodger's desire to provide a significant experience involving aesthetic mastery for young, underprivileged ghetto residents. The workshop can be seen, perhaps, as analogous to a missionary outpost in a foreign environment in which those dedicated to the spread of the benefits of education and development through artistic expression via the film medium bring the word to those unfortunate enough not to have been born with access to it. The element of foreignness was, of course, enhanced by the fact that the area was an almost exclusively Spanish one. Although the children all spoke at least some English, their parents sometimes did not. The teachers were, then, working to overcome a number of problems inherent in the context and they deserve a good deal of admiration for the successes which they achieved.

The nature of the reaction of the locals to the "missionaries" is a little more difficult to assess because we had little direct contact with either the children or the adults in the original workshop area. From what we were able to observe and to gather from the teachers and other members of the Young Filmakers staff, however, it appears that there were two predominant responses once the initial curiosity and suspicion had subsided. First, the children involved, and many of the adults, felt a good deal of pride and loyalty to the workshop. It eventually came to be considered a legitimate and valued part of the community, something which set off their neighborhood from similar ones in the area. Film showings were held to which everyone was invited and to which many came. Membership in the club was coveted by those too young to join (less than eight years) or too old to continue (over 13). Those from a few blocks away would be exposed to a good deal of hostility if they attempted to get involved.

Throughout the period that the workshop was on Rivington Street, and especially toward the end of that period there was, however, a kind of protective suspiciousness which was always ready to respond to any indication that the foreigners who were doing so much to enliven their neighborhood might be using them in some form of exploitation. This often focused on the films themselves. A number of heated confrontations took place over the disposition of the films which were viewed by some as having great monetary value. Much time and energy was spent in reassuring and demonstrating to representatives from the neighborhood that these precious objects were indeed present, well cared for and available to be viewed upon demand.

The workshop was physically located at street level in a storefront in the building next to that which still houses the Young Filmakers offices. It was a very narrow but long space with a display window facing on the street. Furnishings were sparse and in general disrepair. Equipment was generally of good quality but had to be replaced frequently due to damage and, occasionally, to loss or theft. As inadequate as this physical location was, however, it provided the setting for almost all indoor scenes in the films from this period. Considerable ingenuity was employed by some film makers in converting the space into a bedroom, a bar or a castle.

The immediate area around this early workshop is among the poorest and most delapidated in the city. The block in question is situatid between Bowery and Chrystie Streets and is lined by tenements and rubble-strewn empty lots. The buildings show little sign of maintenance of any kind. Not surprisingly, the residents spend much of their time outside.

The human environment is complex and very foreign to a member of the white middle class raised outside of New York. Although the residents are largely poor Puerto Ricans, they are exposed to the alcoholics, addicts, prostitutes, pimps and pushers who are either drawn to the area or are home-grown. The strong family ties and set family structure of Spanish culture provides some stability for some but is under tremendous pressure and is sometimes overwhelmed and subsumed by the various forms of crime and degradation endemic to the area. At least one former member of the club has been murdered and at least one jailed.

The most common occupation is welfare recipient. As a result, those adults not engaged in some form of illicit activity are apt to be found on the street during good weather. This presence is probably of real importance in providing some security for children and may provide a richer exposure to non-familial adults for these children than is common for middle class children. On the other hand, the adults involved probably provide little information of the kind necessary for upward social mobility in the larger culture.

Though most of the films produced at this workshop--almost all of those by children younger than twelve--are set in some fantastic or distant location (the Old West, Transylvania), they are generally filmed on the street or in a near-by park. One thus gains some sense of how the children transform their inhospitable environment through their fantasy and incorporate elements of both the physical and human environment into their play. The closed gates of a storefront become a jail; neighbors sitting on their stoop become the victims of monsters from outer space; the rubble strewn corner lot becomes the plains of the Wild West; the dark interior of the club becomes Dracula's castle.

Some of the older children (12 and 13 years) deal very differently with the environment, however. Their films are more realistic and deal with crime, with addiction and with problems like those involved in coming to New York from Puerto Rico. Here the people and the street are shown as what they are and greater control of what appears in the frame seems to be exerted. For these older children, then, film did appear to offer a means of exploring and reflecting upon their lives as well as a means of developing certain skills to which they would not otherwise have access.

These benefits did not come without cost to these older children, however. Several were faced with a very difficult conflict due to their association with older adolescents and adults who regularly engaged in burglary and theft. Much pressure was placed on some to steal equipment outright or to at least aid in the burglary of the workshop. It is to their credit and to that of the teachers that this pressure was generally resisted and that very little was stolen.

Meanwhile, although the workshop continued to function in the same location for the five years from the Fall of 1969 to the Spring of 1974, a number of changes were taking place. Three different teachers were in charge during this time span and several others acted as assistants for varying periods of time. Like Sheila they were all middle class whites who combined an interest in children with some knowledge of film making. The final teacher to assume responsibility for the workshop, Susan Zeig, however, differed in her interests and motivation somewhat from her predecessors. While we have characterized the earlier teachers as missionary-educators, Susan's approach was more that of the artist-educator. The impact of this perspective on her teaching at P.S. 3 has been detailed in Chapter II, but it also had a profound impact on the course of the workshop's history.

In the Winter of 1974 she approached Rodger and Lynne with the notion of changing both the location and the format of the workshop. This idea was eventually accepted for a number of reasons. First, Susan wanted to work with older children who would be more amenable to the more advanced kind of teaching she wished to pursue. Second, a better location would allow a greater selectivity of students as they could come from a wider area. Third, it might prove advantageous in fund raising efforts as the workshop could be tied more closely to the local schools and the film making could be promoted as a means of enhancing the desire and capacity of the children to learn more traditional subject matter such as reading. Fourth, a better physical environment would improve morale and probably enhance teacher effectiveness. Fifth, both teachers and children would be removed from the undesirable aspects of the Rivington Street area. As these advantages seemed to far outweigh the possible disadvantages, Rodger and Lynne soon provided support for the necessary steps of soliciting funds, searching out an appropriate location and making contact with the local junior high school.

The late Spring and Summer of 1974 was a period of very high activity for the teachers and other Young Filmmakers staff, and the complexity of their tasks was multiplied when, upon approaching the Ford Foundation for funding for their new workshop, the Foundation suggested that a systematic research study of their workshop should be undertaken. As Rodger and Lynne felt that this would be a worthwhile and appropriate thing to do and as such a project would further enhance their ability to raise adequate funds from other sources for the workshop itself, the decision was made to proceed with a scientific study.

Even this additional burden did not totally dampen the spirits of Susan and Jerry Lindahl, the other teacher. With Young Filmmakers staff support, they accomplished the herculean tasks of closing down the old workshop and cataloguing and storing five years worth of films from it; writing, distributing and following up on numerous grant proposals; searching out, negotiating for, cleaning, painting, redesigning and furnishing (with hand-made furniture) a much more adequate workshop space; purchasing, insuring and securing a new set of equipment and supplies; making contact with and negotiating agreements with the principal and teachers in the junior high school; and, finally, meeting with and attempting to educate the hopelessly naive researchers. Given the difficulty of all this as well as the tardiness of the foundations involved in approving the funding, the opening of the workshop with a full complement of children in October 1974 represents a tribute to the tenacity of the Young Filmmakers staff and teachers.

Workshop I: Ongoing Processes

Before proceeding to a narrative of the events which followed the opening of the workshop on Ludlow Street we will attempt to describe in some detail the more constant elements in the kind of living equation which the workshop represented during the two years of our involvement with it. Not surprisingly, given our professional biases, we see these constants as being the relatively stable characteristics of the individuals and groups involved. We will, then, discuss each of the three groups of participants--the teachers, the researchers and the children--in some depth. In addition, we shall provide a description of the sequence of experiences which a child would typically undergo after arriving at the workshop, as this sequence was also relatively stable throughout the study.

The Teachers

Susan Zeig had been teaching at the workshop on Rivington Street since March, 1972, taking over responsibility for it in the Fall of 1973 after Jim Payton, the prior teacher, left to take another job. As we have seen, she was very concerned with producing film makers and films of high quality. She was, and is, an independent film maker herself and attempted to teach film as an art form rather than simply as a technology or means of communication. This manifested itself in great emphasis on editing as a technique and as a concept. This emphasis seems to have largely derived from the acknowledged influence of the work of Eisenstein (1947, 1949) whose theory of film is largely constructed around the concept of "montage." Despite her theoretical orientation, however, in practice Susan Zeig's teaching tended to be rather concrete and specific. Perhaps as a result of her previous experience with young children she did not attempt to teach abstract concepts verbally but almost always through the use of specific examples with actual pieces of film. Adult-made films were shown in the workshop and some attempts were made to use these as sources of material for further discussion but without too much success.

Although clearly in charge, her role as head teacher appeared, at times, to create a certain amount of discomfort. We suspect that her mode of teaching in P.S. 3, where she concentrated her time almost exclusively on a single, compliant, capable, female student may have represented her preferred mode. In the larger workshop, however, this mode of functioning simply was not feasible. Not only were there very few dedicated female students, but there were a host of administrative, communicational and logistical problems to which she had to attend. As a result, she largely focused her work with the children on the process of editing and worked, at one time or another, with almost all the children who became regular film makers.

A second consequence of her leadership role, and, perhaps, of her personality, was that she generally acted as the spearhead of the opposition to the researchers and to any of their attempts to modify procedures at the workshop. This opposition seemed to stem from her fear of a loss of her own authority and control and from a concern that the proposed procedures might either harm the children or at least attenuate the effectiveness of the workshop. To her credit it should be added that with time, discussion and pressure from Rodger and Lynne she was able to accept almost all reasonable suggestions and eventually became genuinely friendly and helpful in the conduct of the study.

Gerald Lindahl had begun working in the Rivington Street workshop one year before the move to Ludlow Street. He is a talented composer and performer of serious modern music, building and performing with state-of-the-art electronic instruments. He is a gentle, enthusiastic person who clearly enjoyed working with the children. His approach was less didactic than the other teachers, and at times he seemed more of a participant than teacher or authority figure. He supervised the dubbing of almost all the films that were dubbed, providing advice, assistance and even music and sound effects from his own library. Although he worked with almost all the children on their sound, he also provided most of the supervision and instruction through the entire course of the production of many of the workshop films. He particularly worked with white, Chinese and female film makers.

Thanks to his gentleness, enthusiasm and flexibility, Gerry was probably consistently the best-liked person in the workshop by everyone, including the researchers. For the children, probably his greatest asset was his clear dedication to helping them produce films with which they would be happy. Little time or effort was expended in attempting to teach abstract ideas or techniques outside of the actual film making process.

The third of the principal teachers was Pedro Rivera. Pedro was born and raised primarily in Puerto Rico, but had a masters degree in English literature from the State University of New York at Buffalo. He had some prior teaching experience and some knowledge of film making, but his work at the workshop beginning in October, 1974 represented his first attempt to teach film making. His background ideally suited him to provide instruction and support in the areas of English language and reading remediation (at the Ludlow workshop's inception a fourth teacher who specialized in reading was also involved, but his involvement lasted only a few months). Pedro was also seen as a potentially valuable role model who could help overcome minority group isolation, especially on the part of the Puerto Rican boys who comprised a majority of the workshop attendees.

Although overt attempts to teach reading or language skills apart from the process of film making were soon abandoned, Pedro's teaching continued to be the most verbal and abstract of the teachers'. This style seemed to reflect his personality and philosophical commitments as much as his training, however. He is a quiet, sensitive, intense intellectual who is dedicated to a specific ideological perspective. Thus, he was less concerned with teaching specific skills or content than with attempting to stimulate the students to consider causal relationships and to use abstract concepts which could be related to larger personal, societal and economic issues. And although his early attempts to present a broad theoretical approach to society, etc., were received with very little enthusiasm by most students, his more abstract approach to film and film making did appeal to a number of the older students.

Like Gerry, Pedro provided consistent supervision through the course of production for many of the films. Pedro, however, tended to work with the Puerto Rican and Black boys.

Carlos Baez functioned both as a teacher and as a researcher. His primary interest was in drama, and he was engaged in completing his undergraduate work in drama at the time of the study. However, he had a strong background in film and video technology and a genuine interest in children. Although he was employed by the research team to act as a technician and consultant, he clearly preferred teaching to functioning as a researcher. This preference seemed to spring from a number of sources. His friendship with the teachers antidated the beginning of the project and remained strong throughout. His academic background and interests were also much more those of the creative artist than those of a scientist. He also seemed to prefer the autonomy and authority of the teacher to the closer supervision given him as a technician. And, finally, he appeared to really enjoy the more direct contact with the children which teaching required. It is not surprising, then, that he eagerly accepted the opportunity to teach at P.S. 3.

Chapter III provides some insight into his teaching style. He was generally a quiet, friendly teacher who permitted as much autonomy as the children would accept. He tended to fucus on the technical aspects of the film making process. At the workship his technical duties did not leave him a great deal of time for teaching so he tended to be in the background, functioning as a teacher only when help was requested by a child or when he had no clear, pressing duty related to his technician role. During the Spring of 1975, however, he did provide the major supervision for the filming of one (and possibly more) of the more impressive films to be produced in the Ludlow workshop.

The Researchers

Frank Eadie was in charge of the research operations at the workshop and spent more time there than any of the other researchers through the two year period. (Carlos was present almost every day during the first academic year but came only sporadically during the second as his employment with the study terminated in August, 1975.) Excepting the Spring of 1975 when the workshop at P.S. 3 was in operation, Frank averaged close to three days per week in the workshop. In addition to supervision of other researchers he normally functioned as either observer, cameraman or tester.

Due, in part, to a general insecurity at assuming primary responsibility for implementing a methodology (participant observation) with which he was not familiar in order to study a phenomenon (film making) about which he knew almost nothing in a setting which was totally foreign (the workshop and its environ), and, in part, to a personality which is conscientious (to the point, at times, of compulsiveness), Frank tended to be a very active observer but inconsistent participant. In his desire to see, learn and record everything about the children, the teachers, the setting and the process of film making, he moved about a great deal and was thus more prominent than was, perhaps, desirable. He also made numerous inquiries of both children and teachers concerning how, when and why a given activity was engaged upon. The teachers and at least some of the students found these traits rather irritating and didn't always hide their irritation. In addition, as he was the researcher-in-charge in the workshop, the teachers' unhappiness at being observed, their impatience with various observational and testing procedures and their displeasure concerning specific behaviors of individual researchers all tended to be focused upon him. Thus, for much of the time his relationship with the teachers was rather strained, though in time, due in part to his persistence and genuine interest in the teachers and children and in film making, the tension was gradually replaced with mutual respect and liking.

Frank also had a unique relationship with many of the children as a result of his dual role as tester and observer. As tester he spent up to two hours interacting with many of the children in a one-to-one situation upon their initial arrival at the workshop. As many of the children came from large, poor families and a majority from broken homes, we suspect that this type of interaction with an adult male was very rare if not unique in the experience of many. The interview material included questions concerning the children's attitudes and feelings, their relations with parents, etc., and as every effort was made to take the child and his answers seriously, the testing procedure may have involved a degree of intimacy that was rare for many children.

In any event, in subsequent encounters with these children while acting as an observer, Frank was the object of a variety of strong emotions. These ranged from a touching vulnerability through affection expressed as persistent teasing to a jealous rage. Some of these children also indicated very directly that they expected to receive film making instruction from him and appeared to be displeased when referred to the teachers.

During the second year of the study Peter Lazzaro spent two days per week at the workshop doing observations. Peter was also a serious, conscientious person, but his primary interests involved counseling and clinical work with children and adolescents rather than research. Although he generally performed his observational duties quite adequately, he tended to maintain even less of an "objective" distance from the children than did Frank or other observers. In fact, he spent a significant part of the time interacting with a group of the older boys in what can only be described as a social relationship. This relationship extended to meetings outside the workshop and to an attempt to do short-term therapy with one of the group who was having serious problems at home and in school.

In addition to Peter, Frank and Carlos, four others, two male and two female, made observations at the workshop. A total of thirteen people did psychological testing over the two year period. Although only four of these were males they accounted for nearly half of the tests given. Except for Carlos all of the testers and observers were graduate students at Teachers College, most studying developmental psychology and most upper middle class and white. And although it is probably safe to say that none of the others had as large an impact on the teachers and children as did Carlos, Frank and Peter, it is also probably safe to say that as a group and as individuals they did indeed have a significant impact. (Conversely, it is also probably safe to say that our experiences in the workshop had a significant impact on our lives.)

Unfortunately, because it is impossible to know what the workshop and its teachers and students would have been like without our presence, it is impossible to determine systematically how big, or even what kind of, an influence we had.

The Children

As we have at least some information on almost 250 children who attended the workshops on Rivington, Ludlow and Henry Streets, we clearly cannot do even brief sketches of enough children to adequately portray the tremendous range of backgrounds and experiences which we observed. As a result, in this section we fall back on a much more quantitative approach and consider the children as groups differing in age, sex, ethnicity, socioeconomic status, the period during which they attended the workshop, and in personality and intellectual traits.

In organizing all the information that we have about how these various groups of children did or did not differ, we will use a number of ideas or themes to which we will return again and again. These themes include, first, the notion that participation in the workshop required the active involvement of the child in a sequence of steps or stages which were imposed by the environment and by the child's needs and desires; second, that at every stage the child chose, within certain constraints imposed by the teachers and by external forces (for example, parents) whether or not to proceed in this sequence; and, third, that there were a series of specifiable factors which influenced these decisions in systematic ways. A fourth theme is that certain characteristics (sex, for example) were so significant that they influenced children's behavior in consistent ways through the entire process while others had an impact only at particular points.

As in any study where the researchers don't have complete control of the situation they are studying, the way the children are grouped and the adequacy of the information upon which the children are assigned to groups can have a crucial impact on the results of the study. The reader needs to be aware, then, that our conclusions concerning some groups can be accepted with more confidence than can those concerning other groups. We will begin by describing the kinds of information that we have been able to gather on the various groups, then we will indicate how the groups have been defined.

Perhaps the most obvious method of separating the children is by period and location of attendance. There was a drastic break in the continuity of the workshop in the Fall of 1974 when it moved to the new location on Ludlow Street. Of the estimated 151 children who attended the workshop on Rivington Street during the 1969 to 1974 period, only three came to the new location often enough to have been considered participants at the new location. The groups at the two locations also differ in age, in ethnic/racial composition and in the relative proportions of females. As a result, it makes sense to study the children coming to the two locations separately, comparing and contrasting the two groups when possible.

The data available on the children from the earlier (1969-1974) period is, unfortunately, very sparse. We have record of the completion of between 207 and 213 films during this period (see Appendix A). These films were made by from 63 to 65 children (in two cases names may have been inaccurately recorded, creating nonexistent film makers). For 38 of these film makers we have registration forms which usually, though not always, contain the address, birthdate and school of the child, as well as the date the form was completed. In most of these cases the ethnic/racial group of the child can be estimated from the name and address. In addition, we have 48 registration forms of children who apparently did not complete a film. Using the rate of completion of registration forms by film makers of different ages and sexes, we estimate that there were approximately 38 other children who came to the workshop but neither completed a film nor a registration form. This is a conservative estimate as there probably was a much higher rate of non-form-completion among non-film-makers than there was among those who did finish at least one film.

For 55 percent of these children we have ages that can be considered quite reliable and we have been able to make fairly good estimates for another 30 percent. Ethnic/racial assignments can be made quite confidently for about 60 percent of the children and with somewhat less confidence for another 30 percent. The only other systematic information available on these children is that on the films themselves. This information is compiled in Appendix A.

During the two years of the study (1974-1976) we have record of 85 children who met a minimum criterion of coming to the workshop on at least two days after testing for periods of at least 30 minutes each and of showing at least some interest in making films. In addition, we have data on ten children who were motivated enough to go through initial psychological testing, but did not return to make films. The information available on these children varies all the way from almost none to enough to do a thorough psychological study. At least 64 of the 95 did at least some filming. Information on these films is summarized in Appendix A. Most of the data used in the following discussion, however, was gathered in psychological testing or in initial interviews with the children. Fifty-four, or 57 percent, of the children were given at least one of the psychological tests, while 40 children were interviewed. Unfortunately, three of the interviews have been lost or partially destroyed, leaving only 37 (39 percent of the cases) complete or nearly complete sets of this invaluable data. We have good data on the attendance patterns of approximately 70 percent of the children and at least some information on almost all of the children.

Ethnic/racial assignments for children of mixed parentage were made on the basis of the surname which they used. The "Black" group contains only children coming from a U.S. heritage. Those with Spanish surnames are classed as Puerto Ricans regardless of skin color or physiognomic features. The child's age is determined as of the date of the first psychological testing or of his first arrival at the workshop if he was not tested.

In turning now to the obvious first step in participation in film making--which was arriving at the workshop in the first place--we need to make two more qualifications concerning children whom we will not discuss hereafter. Over the two years of the study three different attempts were made to teach film making to children from the local junior high school during the school day. These attempts included from 40 to 50 children and met with varying degrees of success, but with few exceptions the children involved did not pursue their work beyond the in-school hours allotted to it. As our work was focused on the on-going after-school workshop we have little data on these children and, with the exception of those motivated enough to also attend the after-school program, they will not be included in our subsequent analysis. Similarly, there is another set of children who possibly number as many as 40 to 50 who appeared at the workshop once or even twice but about whom we have virtually no information. These children may have played a small part in a film or may have only observed whatever was going on in the workshop and decided not to return. Who these children were and how they differed from those about whom we have information will, unfortunately, remain a mystery at least until someone has the temerity to attempt a similar study.

That said, we can at last talk about those children about whom we do have information. Figure 10 summarizes much of the demographic information on the children

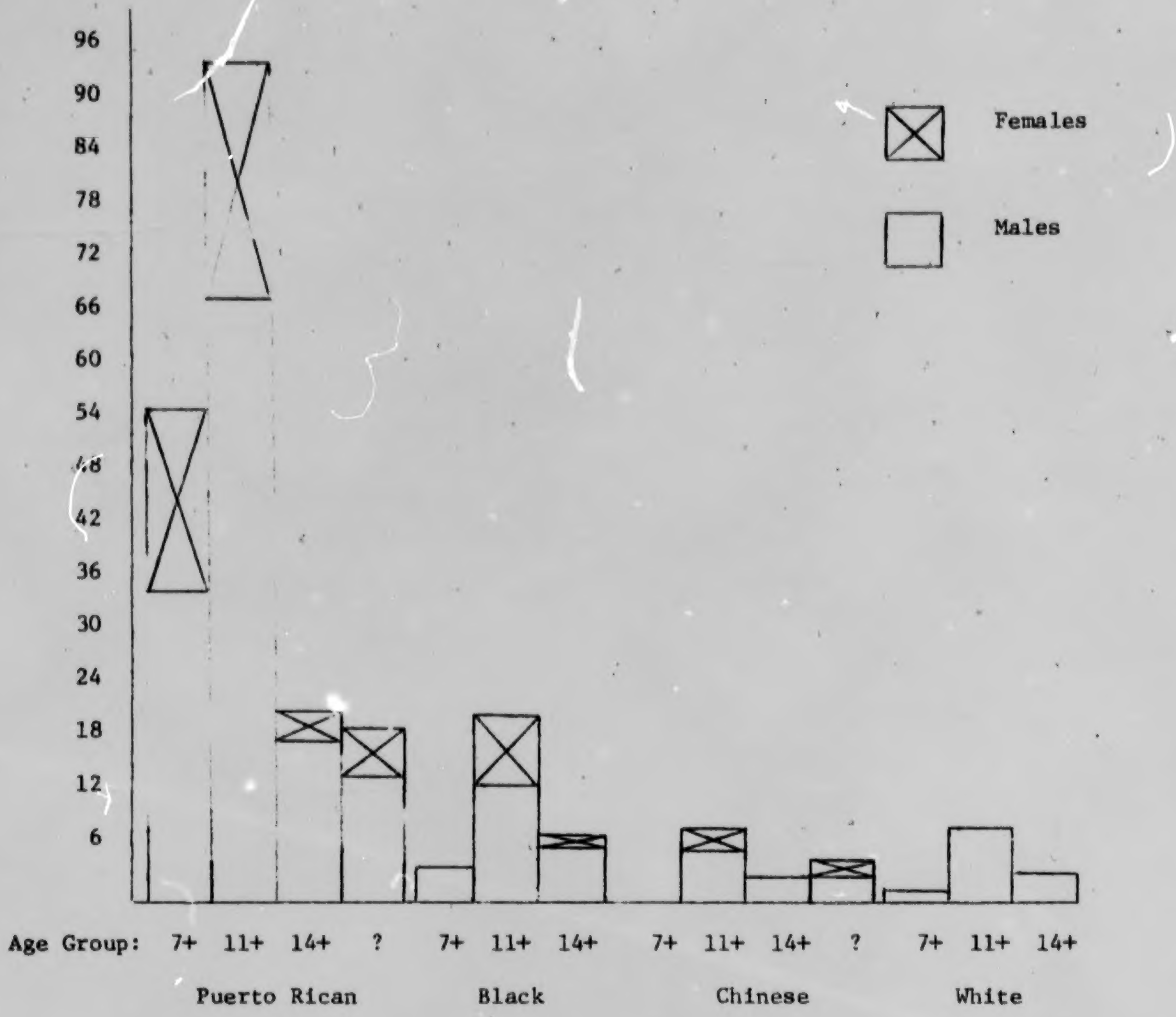

Fig. 10. The Number of Children who Attended the Workshop by Ethnic/Racial Group by Age Group by Sex (1969 - 1976).

who attended the workshop over the entire period of its existence. Although there are significant differences between the groups from the two periods, the figure portrays several patterns which were consistent over both the Rivington and Ludlow periods. The most obvious is, of course, the domination of Puerto Rican youngsters. Even after moving out of the primarily Puerto Rican residential neighborhood, 57 percent of the children participating were of Puerto Rican extraction. Blacks represent the next largest group, and Chinese and White the smallest.

We have census data which allows us to compare our percentages to those of the entire population of children in this part of the city. The vast majority of the children lived in an area encompassed by ten census tracts. Detailed data is available (U. S. Bureau of the Census, 1972) on the entire population of these tracts from the 1970 census. In addition, less detailed data is available on the Black population in the three tracts with 400 or more Black residents. These three tracts include 75.4 percent of all Blacks living within the ten tract area. Likewise, data is available on the Puerto Rican population of six tracts which contain 95.4 percent of the Puerto Ricans (defined as individuals of Puerto Rican birth or parentage) living in the larger area.

For the area as a whole, only 20.9 percent of the residents were Puerto Ricans in 1970 and 6.9 percent were Black. As we did not question children on the specific location of their origins, the figure of 27.6 percent which represents the Spanish language portion of the population may be a better comparison than the Puerto Rican figure. It should also be pointed out that by 1975 the proportion of Blacks and Puerto Ricans may well have been somewhat higher. Fully 33 percent of the 1970 population had not lived in the same place five years before, and the minority group percentages are almost certainly increasing. Another factor related to the discrepancy between the population proportions and those at the workshop is the age distribution of the various racial/ethnic groups. This is important because, as in most "transitional" areas, the average age of the White population is much older than that of the groups moving into the area.

While Puerto Ricans made up 27.7 percent of the population of the six tracts where they were most numerous, fully 38.2 percent of the children between ten and sixteen years were Puerto Rican. Similarly, Blacks made up 11.4 percent of the population where they were most numerous, but 14.1 percent of ten- to sixteen-year-old children were Black. Table 11 summarizes the porportion data for the four primary racial/ethnic groups living in the area and attending the workshop. Proportions for ten- to sixteen-year-olds are estimates. Unfortunately, data broken down by age are not available for either White, non-Spanish or Oriental people in these tracts.

Table 11

Proportions of Total Lower East Side Population
And of Ten- to Sixteen Year-Olds in 1970,
And of Children Attending the 1974-1976 Workshop
By Racial/Ethnic Group

Racial/Ethnic Group	Total Population	10- to 16-Year-Olds	Workshop
Puerto Ricans	20.9%	29.3%	56.8%
Blacks	6.9%	9.1%	24.2%
"Other" Races (primarily Oriental)	25.9%		9.5%
Non-Spanish Whites	39.6%	54.9%	8.4%

As the data in Table 11 clearly illustrates, even accounting for probable changes in population composition over the 1970 to 1975 period, the children coming to the workshop are not representative of the racial/ethnic composition of the geographic area in which they live. Oriental and especially White children are badly under-represented, and Puerto Rican and especially Black children are over-represented.

We will not attempt to provide even a tentative explanation of this lack of representativeness at this point. As we shall see, the children who came are not fully representative of children of their own racial/ethnic groups. In other words, a large number or selective factors were at work and we shall be describing other ways in which they influenced workshop participation in the following sections. These factors include a desire on the part of the Young Filmakers teachers and administrators to serve disadvantaged populations, locations rather distant from the center of the Oriental population (Chinatown), a tendency on the part of relatively upper-income groups to send their children to private and parochial schools, and a reluctance on the part of these groups to allow their children to travel the streets in the evenings. Before going on to other characteristics of the workshop children, we should at least consider the implications for the study of the racial/ethnic distribution of these children.

The fact that Puerto Rican children did constitute such a significant majority in this context can be seen as both a limitation of the study in its generalization to other situations where the ethnic/racial distribution is different, but also as an opportunity to study the result of reversing the commonly occurring relationships among these groups in our society. Thus, although Puerto Ricans represent a tiny minority of the total U.S. population and are third in size behind Whites and Blacks in New York City, for the purposes of this study they will be considered the majority group and their behavior will be contrasted with that of the other children.

The fact that the workshop existed within a larger social and cultural context will not be ignored, however. The larger setting is important from a number of perspectives. First, the workshop was analogous to the situation in many urban schools where children predominantly from minority groups are taught by teachers of both their own and other (usually, as in this case, White) ethnic/racial groups. And, secondly, it seems important to recognize that these were children attempting to integrate influences from at least two differing cultures while they worked in a medium (film) in which almost all of their experiences were with models which were created within and reflected the majority culture. This tension among the various cultural influences impinging on the children in combination with the various local social pressures, which acted both to enhance and to oppose the more external pressures, provides a great deal of the excitement and drama inherent in our study.

A second clear trend in our data which is well illustrated by Figure 10 is the large difference between the sexes. At all ages, in every location, the boys vastly outnumbered the girls (with the exception, of course, of the projects conducted during school hours). This trend appears to be a developmental one, as well. As can be seen from the data in Table 12, the proportion of girls decreases at each higher age level. This relationship is statistically significant ($\chi^2=6.925$, $p<.05$) so it cannot be considered a chance occurrence. It is possible that this is in part due to differences between the two workshops (these differences will, again, be discussed later), but the fact that girls represent a much smaller proportion of the oldest age group than they do of the middle age group in both workshops is strong evidence for the notion that one or more factors related to age was influencing the participation of girls.

Table 12

Number and Percentage of Children Achieving Various

Stages in Film Making By Period, Sex, and Age

(1969-1974 Includes Estimated Data)

Age		1969-1974			1974-1976			Combined		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
					Exhibited Interest					
7-10	N	37	20	57	2	0	2	39	20	59
	%	28.5	15.4	43.8	2.2	0.0	2.2	17.7	9.1	26.8
11-13	N	48	21	69	48	15	63	96	36	132
	%	36.9	16.2	53.1	53.3	16.7	70.0	43.6	16.4	60.0
14+	N	3	1	4	23	2	25	26	3	29
	%	2.3	0.8	3.1	25.6	2.2	27.8	11.8	1.4	13.2
Total[a]	N	104	47	151	76	19	95	180	66	246
	%	68.9	31.1	61.4	80.0	20.0	38.6	73.2	26.8	100.0
					Did Some Filming					
7-10	N				2	0	2			
	%				3.2	0.0	3.2			

Table 12 (cont'd)

Age		1969-1974			1974-1976			Combined		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
11-13	N				35	7	42			
	%				56.5	11.3	67.7			
14+	N				17	1	18			
	%				27.4	1.6	29.0			
Total[a]	N				57	8	65			
	%				87.7	12.3	68.4			
Completed At Least One Film										
7-10	N	14	11	25	1	0	1	15	11	26
	%	23.0	18.0	41.0	2.9	0.0	2.9	15.8	11.6	27.4
11-13	N	22	12	34	20	4	24	42	16	58
	%	36.1	19.7	55.7	58.8	11.8	70.6	44.2	16.8	61.1
14+	N	2	0	2	9	0	9	11	0	11
	%	3.3	0.0	3.3	26.5	0.0	26.5	11.6	0.0	11.6
Total[a]	N	40	25	65	30	4	34	70	29	99
	%	61.5	38.5	43.0	88.2	11.8	35.8	70.7	29.3	40.2
Completed Three or More Films										
7-10	N	5	6	11	0	0	0	5	6	11
	%	20.8	25.0	45.8	0.0	0.0	0.0	14.3	17.1	31.4
11-13	N	10	2	12	7	1	8	17	3	20
	%	41.7	8.3	50.0	63.6	9.1	72.7	48.6	8.6	57.1
14+	N	1	0	1	3	0	3	4	0	4
	%	4.2	0.0	4.2	27.3	0.0	27.3	11.4	0.0	11.4
Total	N	16	8	24	10	1	11	26	9	35
	%	66.7	33.3	15.9	90.9	9.1	11.6	74.3	25.7	14.2

[a] Totals include subjects for whom ages were not known.

Several reasons for the large and highly significant (less than one chance in a thousand for both workshops that the proportions occurred as the result of random factors) difference in the rates at which boys and girls came to the workshop are suggested by what we know about those who did come and by other research on children.

Perhaps the most obvious reason to those who observed the workshop in action was that it quickly became a form of boys' club. Though this was not the teachers' intent, the large number of regular, male participants soon led to the kind of social atmosphere common to boys' clubs, scout troops, etc. Thus girls who did attend had to cope with the combination of overt pursuit, overt hostility, exclusion and admiration-at-a-distance which could be expected from boys in early adolescence. But because it took place in a situation which was primarily boys' (rather than girls' or neutral) turf, the boys tended to be both more aggressive and more exclusive than they probably would be in other environments. One indication that this may account for some hesitancy on the part of many girls was the fact that all of the girls on whom we have this information (eight of the nineteen who attended during the study period) had brothers that were close to them in age, and six of the eight had more than one brother. The girls that did come, then, were probably better prepared than many to deal with the workshop's social system.

A second reason of a more general kind deals with differences in interests between boys and girls of this age. It seems likely that film making was seen as both more a masculine than feminine type activity and as less interesting and rewarding than more sex-role appropriate activities by most girls. This interpretation is again bolstered by the data on the family structure of the girls who did come. Not only did all eight girls for whom we have data have brothers, but all eight had older brothers. This should be contrasted with the frequencies of other types of sibling relationships to give an idea of its signifiaance. Only two had younger brothers, three had older sisters and four had younger sisters. Based on this distribution, the unanimity of older brothers is highly significant statistically (χ^2=5.79, p<.02). The link between this data and the interests of girls in general is a series of studies conducted by the author and others which are summarized in The Sibling (Sutton-Smith & Rosenberg, 1970). Using several different measures of interests of subjects ranging in age from elementary school to college age, these studies consistently demonstrated that the girls whose interests and activity preferences were most similar to those of boys were those girls who had older brothers. Similarly, in studies using paper and pencil measures of femininity, girls with older brothers generally have the lowest scores of any of the female groups.

That film making should be seen as a masculine activity is perhaps surprising in that it is clearly an expressive activity and should, therefore, be seen as feminine according to the typology developed by Parsons and Bales (1955) and widely accepted in the social sciences. That this typology does not have total applicability in our culture, however, is demonstrated by the male domination of the "communication" media. Not only are these media controlled by male-run corporations, but males generally play the central characters, at least in visual media presentations (Comstock, et al., 1978). Although we don't have data to demonstrate the disparity, it seems clear that men vastly outnumber women in all media-related roles, excepting possibly that of audience. This fact is probably not lost on adolescents in general and probably influences their perception of the sex-role appropriateness of involvement in such activity as film making.

In addition, it seems clear from the reactions of the older children in the animation study (Chapter VI) that, at least in animation, the use of equipment--clearly an instrumental activity in Parsons and Bales' dichotomy--and success in the manipulation of it, played a central role in children's conceptualization of the film making process. Thus, the use of cameras, lights and sound and editing equipment may lead to film making being conceptualized as more a constructive, instrumental activity than an expressive one by most children. Girls, excepting those with older brothers, then, probably see film making as an area with less intrinsic interest and as one in which they would have a lower probability of success than is the case in other, more explicitly feminine and social areas.

A third probable contributor to the low participation by girls has to do with the workshop's location. By placing it in a non-residential area we may have inadvertently limited female participation. Studies (Hart, 1979) indicate that girls do not travel within as large a spatial range as do boys of the same age. Although these studies have generally been done with children of different ethnic and socioeconomic groups than ours the contrast between the sexes may well apply to these children as well. Thus, for many girls the workshop may have literally been out-of-bounds.

A related rationale concerns differential parental requirements of boys and girls. In part the reduced range of girls is due to limitations placed by parents on their daughters. These limits appear, again, to be due in part to greater expectations of girls' participation in household duties (Hart, 1979). It seems very likely that many girls in the area around the workshops had many of their afternoons occupied with child-rearing and other household duties. As this was an area typified by large families and low incomes, it seems likely that household work by adolescent girls was particularly important to free mothers to work at income producing jobs. Given the nature of Spanish family structure, such requirements are probably much less frequent for boys. That girls in this area were required to be responsible for younger siblings is supported by the observation that three of the girls who did attend brought younger siblings (or unrelated children for whom they were "babysitting") with them to the workshop, in one case on several occasions.

Additional parental restrictions may have also been imposed as a result of a probably legitimate concern over having daughters returning home through largely deserted streets, perhaps alone, at a time (six p.m.) which was after dark for most of the period (October through June) during which the workshop was open. Again, such restrictions were probably less rigid for boys.

A sixth possible explanation rests on the notion that girls were more discriminating than boys in assessing their likelihood of succeeding at the tasks involved in film making and thus the girls who did come were both fewer and better qualified to succeed at film making. It has been pretty well established that, at least among White children, boys generally expect to perform better at most tasks than do girls of the same age and skill level (Maccoby & Jacklin, 1974; Parsons, et al., 1976). Recent studies have tentatively suggested that this is primarily due to a more realistic assessment by girls of their own capabilities in relationship to the task demands. Boys generally overestimate their abilities.

Tentative evidence that differential self-selection of this sort was occurring comes from the psychological testing data. (See Chapter XII for a fuller discussion of this data.) The workshop girls' IQ scores were not only higher on average than were those of the average White child used in standardizing the IQ test, but higher than those of the boys in the workshop as well. In fact, the girls' scores averaged approximately ten IQ points higher than boys of the same racial/ethnic group. Interestingly, however, the girls' scores were not higher than those of the boys who were most successful at film making. Thus, while less capable boys tended to fall away after coming to the workshop, less capable girls didn't come in the first place.

In summary, then, the workshop was apparently seen as a masculine place where only a very small group of girls with atypical interests and unusual social and cognitive abilities had both the desire and temerity to come. In addition, parental restrictions and requirements may have played a part in keeping many girls away, both directly by requiring them to work at home and indirectly by limiting the extent of their travel.

While several explanations for the low attendance of girls in general seem very plausible, the decrease in attendance among older girls is more difficult to explain. We suspect that this pattern may be related to increasing awareness by the older girls of what is and is not sex-role appropriate behavior and to an increasing concern with social, as opposed to instrumental, activities. In addition, child care and other household responsibilities probably increase with age. Both of these suggestions seem reasonable if we assume that older adolescents are largely concerned with activities directly related to adult roles which they may in fact assume, and that film making is seen as an activity which is much more likely to be engaged in by adult males than by adult females.

We turn now to a brief discussion of the social class from which the children come--at least insofar as class is defined by family income and parental occupation. The initial interview used in the second year of the study included questions concerning the occupation of both parents or caretakers. Many of the first year children who returned for follow-up testing were also questioned. Not all children were able and/or willing to answer this question, but we have some information on the parents of 34 children. Of these, only three (one Puerto Rican, one Chinese and one White) came from families where one or both parents were involved in professional or managerial work. In contrast, nine children (eight Puerto Ricans and one Black) were from families where welfare or unemployment or disability insurance were apparently the primary source of income. In the remaining 22 cases, one or both parents were employed in unskilled or semiskilled jobs. The most common of these were taxi, bus or truck driver, building maintenance worker, and factory and clerical positions.

By consulting data from the 1970 U.S. census (Bureau of the Census, 1970), it was possible to calculate approximate family incomes for those children whose parents were employed (see Chapter XII for a discussion of the procedures). These approximations reflect 1969 income levels and probably underestimate true 1969 income, as the parents of children old enough to participate in the workshop had, in many cases, been in the workforce longer than the median worker, upon whose income the estimates are based. Other contributions (from older siblings' incomes, for example) to family income are not included as well. Income for families receiving welfare was estimated based on New York State data (New York State, 1974) for payments under the categories of "aid to dependent children" and "home relief--family cases." Again, 1969 data were used so as to be able to make consistent comparisons.

These estimated family incomes range from a high of $12,400 (a family in which the father held three jobs and the mother worked part-time) to a low of $2,800. (In considering these figures, one must keep in mind that the cost of living has almost doubled since 1969.) They average $6,638, and the median value is $6,100. This compares to a national median for 1969 of $9,433 (Bureau of Census, 1972) and to a national median for "Negro and Other" (ethnic/racial group) families of $6,190. For the New York (City) Standard Metropolitan Statistical Area, median income for all families was $10,870, and for Negro families, $7,313. For Negro families in Manhatten, average income was $7,479, and the median was $6,550 (Bureau of the Census, 1973). Only five (15 percent) of our children came from families with estimated incomes above the national median and only one from a family above the New York metropolitan area median. The median for the group is close to that for minority groups nationwide, and the mean and median are somewhat above those for Puerto Ricans in Manhatten ($6,209 and $5,543), but they are well below those for Black families in the New York area. It should be reemphasized that the estimates are probably low ones, but probably not so much as to change the group's standing relative to other groups.

It is quite clear then that these children come, as a group, from a lower-income, lower-status background. There are no apparent differences between the boys and girls on these measures nor is there much separation between the Blacks and the Puerto Ricans. The one White and one Chinese boy on whom we have data rank fifth and seventh, respectively, among the 35 children with estimated incomes, but whether they are representative of the children of their racial group as a whole is not totally clear. Although some of the White and some of the Chinese participants were probably of lower-class background, it does seem likely that the children from these groups were of a generally higher economic and educational level than were the Blacks and Puerto Ricans.

When we attempt to determine whether these children are representative of the groups from which they come, economically, some interesting comparisons emerge. Average income was $7,838 and median income was $6,930 for all families in 1969 in the t[illegible] census tracts from which all but one or two of our children come. Our children's families averaged $1,200 less than the average family, and the median was approximately $800 lower. This contrast holds only for the Black children, however, when we compare our children with families of the same racial/ethnic group. Median income for Black families in the three census tracts containing 75 percent of the Black population was approximately $7,380, while the median for our Blacks (only six children have data available) was $6,300. The mean for our group was only $6,200.

For Puerto Rican families in the applicable area, on the other hand, median income was only approximately $5,100, so the median of $6,100 for our twenty-seven Puerto Rican children (mean of $6,415) is a full $1,000 above that for the general Puerto Rican population in the area. Seventy-four percent of the children are from families with incomes as high or higher than the population median. Economically, then, the Blacks and Puerto Ricans coming to the workshop were much more like each other than they were representative of their respective racial/ethnic groups. Their low standing in relationship to the area in general is also clearly related to the distribution of children by ethnic group, though whether the selection was based primarily on economic status or on race/ethnicity is probably unanswerable. The similarity of the two groups does argue for an economic interpretation, however.

Having discovered that the workshop attendees were uncharacteristic in their race/ethnicity, sexual distribution and economic level, we turn to a fuller discussion of an area already touched upon in our discussion of the poor attendance by girls. Our previous work with the consequences of family structure on various types of development led to the collection of family data from those children who received the second-year initial interview and from several others as well. Analysis of this data has produced a number of interesting findings. Probably the most outstanding of these is the very large size of the families from which the children came.

On average, the 56 children (59 percent of the 1974-1976 scmple) about whom we have data came from families containing 4.73 children. In 1976, women in the age range of 35 to 44 years (the age range which probably included most of the mothers of our children) who had been married had had an average of 3.06 children for the nation as a whole (U. S. Bureau of the Census, 1977). As with income, of course, in order to know whether the high number of siblings is typical of the particular geographical, economic or racial/ethnic background of our children, or whether it is ideosyncratic to our group, required a detailed analysis.

The six White and Chinese children for whom we have data come from families with an average of 2.67 children (not much different from the average of 2.98 for white women in the 35 to 44 age group in 1976). As a result, further analysis is confined to the Black and Puerto Rican children. The thirteen Black children averaged a family size of 5.62 children, while nation-wide 35- to 44-year-old married Black women averaged 3.73 children. Puerto Rican children averaged 4.76 children per family. Unfortunately, national data for Puerto Rican Women does not appear to be available. Data is available for the number of children under 18 years in Puerto Rican families nationally, however (U. S. Bureau of the Census, 1976). The average number was 1.89 in 1975. The comparable number for our children is 3.62. Actually these are not strictly comparable numbers since the national figure uses a base which includes many families whose children had not yet been born. This shows Puerto Rican women with at least one child to have had an average of 3.69 children. This is probably an overestimate of a value which is strictly comparable to our group in 1975 or 1976 because it does not include women who had not been married but had had children (there was at least one child in our sample whose mother apparently had never been married); because average family size probably decreased for Puerto Ricans between 1970 and 1976 as it did for the population as a whole; and, finally, because some of the mothers of the children in our project were probably younger than 35 and would be expected to have additional children. (These considerations also apply to population estimates which are cited subsequently.)

For women of all races who had ever been married in the fourteen census tracts of concern, and who were in the 35 to 44 year age group in 1970, the average number of children was 3.02. Data for the number of childless women is not available for the specific area but based upon the racial/ethnic composition and geographical characteristics (i.e., "central city") of the area, we can use national figures (U. S. Bureau of the Census, 1977) to adjust the children per woman figure. This yields an estimate of 3.30 children per woman with children--still far below the 4.70 children per family in our group. Thus, our children clearly come from larger families than is characteristic of the area as a whole. The difference is highly significant statistically ($p<.001$).

We are again foiled by the Census Bureau in our attempt to compare our children to those of the same ethnic group within the Lower East Side, as data for Black and Puerto Rican women has not been published. The closest piece of data which can be determined by ethnic group is the number of children under 18 years of age in families with children. For our group this number is 3.34. For the entire area in 1970 the average is 2.14, and is again highly significantly different. We estimate that Puerto Rican families with children under 18 in the area averaged 2.29 children under 18. The Puerto Rican children in our group with data available (31 of the 54 Puerto Ricans) came from families averaging 3.71 children under 18. Again, the chances of these children having been selected at random from Puerto Rican families in the area is less than one in a thousand.

For the Black children the situation is not as clear because two sets of data are in conflict. While the total number of siblings data on thirteen Black children indicates that they come from even larger families than the Puerto Rican children, the average number of children under 18 in families of the nine Black children for whom we have this data was only 2.56 children. This dramatic shift is partially due to the small number of Black children involved and partially to a tendency for Blacks to have been born late in their family birth order and, therefore, for many siblings to be older than 18 years. The 2.56 figure contrasts to an estimate of 3.13 children per Black family with children in the area. The latter figure is somewhat suspect, unfortunately. Its large size is primarily due to the very low proportion (54 percent) of Black families in Manhattan that had children under 18 in 1970 (U. S. Bureau of the Census, 1973). This proportion was used to determine the number of Black families in the Lower East Side area who had children under 18 years (the number of families is available for the area, but the number with children under 18 is not). Though accurate for the borough as a whole, the 54 percent figure may not apply to the area in question. The current figure may be closer to the 71 percent which applies to Puerto Rican families in Manhattan.

Additional evidence that the 3.13 figure is an overestimate comes from the fact that for all of Manhattan the average for Black families is only 2.41. Black women between 35 and 44 who had been married and had had children averaged 2.81 children over the entire borough. Thus, our Black children clearly came from larger families than is typical of Manhattan Blacks ($\underline{p}<.01$), but it is not clear whether their families were typical of Black families in the Lower East Side area.

When the sex of the children is considered in conjunction with their ethnic/racial grouping the situation becomes even more complex. As Table 13 indicates, there is a dramatic difference between the family sizes of most of the Puerto Rican boys and those of the Puerto Rican girls. This difference alone is statistically

Table 13

Family Structure Data by Ethnic/Racial Group and Sex

(Number of Children in Workshop Population)

	Puerto Rican		Black		White/Chinese	Total
	Males	Females	Males	Females	Males	
Family Size:						
1-4 children	18	0	4	3	6	31
5+ children	13	6	5	1	0	25
Total	31	6	9	4	6	56
Birth Order:						
1st - 3rd	18	1	3	2	6	30
4th or later	12	4	6	2	0	24
Total	30	5	9	4	6	54

significant ($p=.012$). While the difference between the Black boys and girls is not statistically significant, it is interesting to note that the trend for Blacks is opposite to that for Puerto Ricans. Black boys tend to be from larger families than Black girls. White and Chinese boys show the same tendency that the Puerto Rican boys and Black girls do to be from smaller families, but even more strongly. The over-all pattern deviates significantly from one which might be expected due to a random selection of children ($p<.01$).

In attempting to explain the bias for children from large families we are hampered considerably by the paucity of systematic social science work dealing with children from large families. What is available, together with what we know of these children does suggest two types of explanations, however. The first, based on ideas concerning social networks will be taken up when we discuss how the children were recruited for the workshop. The second type of explanation deals with motivational factors. The traditional psychological construct which would seem to apply in this situation is a need for achievement. It seems possible that film making is seen as a means of distinguishing oneself in a creative way and, therefore, should attract children with especially high achievement needs. It may be, then, that children from large Black and Puerto Rican families have higher achievement needs than do their peers from smaller families. This explanation is buttressed somewhat by the data on birth order which is also contained in Table 13. This indicates both that there is large agreement between the two measures of family structure when the various ethnic/racial by sex groups are compared and that this agreement is due to a general trend for the children to be born late in the family order, though, again, the White and Chinese children are exceptions. For the Black and Puerto Rican children, a random distribution of birth orders, given the observed family sizes, would produce 32.4 children of first through third birth order. In fact, only 24 were this early. (That this distribution is partially due to the fact that in very large families children as young as twelve or thirteen are of necessity later in the birth order does not influence the conclusions to be drawn from the relationship.)

In what are probably the only studies of the relationships between the need for achievement, family size, birth order and socio-economic status, Rosen (1961) found that in poorer, large families the later-born, and especially the last-born son had higher achievement needs than did the first-born son. Unfortunately, he also found that children from large families generally had lower achievement needs than did those from smaller families. As his sample did not include Puerto Ricans and the results for the small group of Blacks were not reported separately, however, it remains possible that his family size results apply only to White (and probably Chinese) children, and that this difference accounts for at least part of the difference in family size that we find between the Blacks and Puerto Ricans on one hand and the Whites and Chinese on the other.

If, then, we assume that for poor Puerto Ricans and Blacks achievement need increases with family size and with birth order, while it decreases with family size for Whites and Chinese and we combine these assumptions with some ideas about affiliation needs and self confidence, we can explain the observed pattern of family sizes and birth order. It has been theorized with some empirical support (Gordon, 1971) that early adolescence is a period in which the child's growing needs for peer affiliation and approval and for personal achievement are in dramatic conflict and that this conflict and attempts to resolve it have a major influence on behavior. In addition, there is both empirical support and theoretical reason to believe that many children pursue one of these goals at the expense of the other. Bossard and Boles' (1955) work with large families would suggest that this may be especially true in large families. A good deal of empirical work summarized by Sutton-Smith and Rosenberg (1970) suggests that the alternative which is responded to varies systematically with the family structure of the child.

If one recalls that the workshop had not only the characteristics of a place in which achievement could be pursued but also of a (primarily Puerto Rican) boys club, then it seems reasonable that it would also attract some (primarily Puerto Rican) boys who were primarily concerned with affiliation. Both the research literature and our assumption concerning achievement needs would suggest that such boys would be from smaller families and earlier birth orders. A quick check of the family size of four Puerto Rican boys who were notorious for hanging out at the workshop and working sporadically, if at all, shows that three were from three-child and one from a four-child family. It is also interesting to note that when these boys did work it was usually with close adult attention and supervision (as with Rose in Chapter II), while boys from larger families were both more task-oriented and more independent.

Why there were a significant proportion of Black girls from small families is much less clear. Our primary suggestion is that these girls were exceptionally self-confident and that they brought a peer support system with them. All four who came at all frequently had a close girl friend and/or relative with whom they attended and with whom they worked--thus fulfilling both achievement and affiliational needs. The one productive Puerto Rican girl about whom we have much information also used this strategy though she was, of course, from a large family. That Puerto Rican girls from smaller families did not also use this strategy may be due to the subcultural differences in attitude toward the instrumental competence and status of women and to concomitant differences in self-confidence. Especially among lower class Blacks, women are generally considered to be the intellectual and instrumental equals, if not superiors, of males while this does not seem to be true among Puerto Ricans. This suggests that the Puerto Rican girls who came were even more select a group than were the Black girls. (In fact, the Black girls who came to the workshop represent a larger proportion of the Black girls in the area--as of 1970--of the appropriate age than do the Puerto Rican girls when compared to the Puerto Rican girl population. The comparable proportions for Black and Puerto Rican boys are almost identical.)

A slight modification to the need achievement, need affiliation suggestion already described grows from the observation by Richard Chalfen in a study of film making by Black and White teenagers reported by Worth and Adair (1971). He noted that while White, middle class children preferred to direct and edit their films, Black, lower class boys and girls much preferred to appear in the film. This desire seemed to have less to do with learning or perfecting acting skills than it did with creating a favorable, reviewable image of themselves engaged in activities with which they were familiar. These were generally social activities, and the individual's performance was often compared to those of his peers.

In the Young Filmakers' workshop much more emphasis was placed on narrative and upon the technical aspects of the process so that the kind of phenomenon described by Chalfen was much less obvious. It was true, however, that the film maker probably did appear in a majority of the workshop films and that seeing themselves performing on film was probably the most exciting part of the experience for many children. Thus, the need motivating many of the children may not have been so much the need to achieve through the creation of a socially recognized product as to examine one's own performance in preferred activities and to compare it to those of one's peers. These needs, which we will term needs for self-display and for social comparison, fit very neatly into the framework proposed by Festinger (1954) and may well be universal. They may, however, be especially potent during adolescence due to their potential role in a developing sense of a unique identity. Erikson (1968), of course, sees the formation of an adult identity as the primary concern of the adolescent.

It also seems possible that a child growing up in a large family would be especially concerned with establishing his own identity, distinct from those of his siblings. The opportunity to study his own image and performance at the distance provided by film might be especially valuable for him. The opportunity to have a permanent record made of his unique performance might also be especially enticing for one who is used to being one among many.

Taking Chalfen's and our observations together, then, it seems possible that there are different motivational factors influencing film-making volunteerism among children of differing ethnic, economic and family structures. Among White, middle class children (and possibly other middle class children as well) the primary factor is a desire to create a distinguished product, and volunteering should be highest among those with a high need for achievement. Much work (Sutton-Smith & Rosenberg, 1970) indicates that the need for achievement is highest among only children. Interestingly, the most productive White or Chinese film maker in our group was also the only only child. The lack of other only children probably is due to the limited number of middle class children of any kind. This was related to other factors which have and will be discussed elsewhere.

In lower class groups where the need for achievement is generally less salient (Rosen, 1961), needs for self-display and evaluation through social comparison may be the most effective motivators and may be highest among children from large families, particularly those late in the birth otder.

Other possible motivational factors related to birth order and family size concern the potential for a relationship with the teachers and the role of social competence and comfort in social situations. As the relatively high teacher-to-student ratio and the individual teaching style used in the workshop offered the opportunity for direct, continuing relationships with adults, this may have had an especial appeal for children who have limited access to their parents. This is, of course, more likely to be true for children from large than for those from small families.

Because film making (other than animated film making) is very much a social activity it is possible that children from large families who have, of necessity, a great deal of experience with social relationships felt that it was an activity in which their experience would be an asset. This suggestion, though able to stand alone, can also be seen as bolstering either an achievement explanation or a social comparison one. Clearly, social skills would be valuable if achievement is one's goal. Likewise, familiarity with social comprrison processes may lead to searching out situations in which--as in film making--this process is facilitated.

Having offered a number of possible explanations for our family size and birth order findings, we now turn to a final piece of data concerning the families from which the workshop participants came: the number of parental figures in the home. In 1975, 80.3 percent of all U. S. children under 18 years of age were living with both parents (data from U. S. Bureau of the Census,1975--"both parents" includes families with a step-parent), while 15.5 percent were living with their mother only. For Black children, on the other hand, the comparable figures were 49.4 percent and 40.9 percent. The figures for Puerto Ricans were probably intermediate between these two sets of numbers. For all families of Spanish origin in 1975, the figures were 76.5 and 19.6 percent (U. S. Bureau of the Census, 1976). Of Puerto Ricans under 18 in 1970, 58.8 percent were living with both parents (U. S. Bureau of the Census, 1973a). Of the 38 children attending the workshop for whom we have this information, 22 (or 57.9 percent) were living with two parents (including several with a step-parent), while the remaining 42.1 percent were living with their mother only. Thus, our children were far below the national average, but not far below the probable figure for Puerto Rican families. Sixty-one percent of the 28 Puerto Rican children with data in our group were in two-parent homes, whole only three (37.5 percent) of the eight Black children about whom we have information also had two parents at home.

Data for the relevant census tracts from 1970 (U. S. Bureau of the Census, 1972) is not too different from the national data in 1975, excepting that for Blacks. For the entire under-18 population of the fourteen tracts, 73.0 percent were in two-parent families, which is still much higher than is the figure for our group. However, we estimate that the figure for all Puerto Rican youths to be approximately 64 percent--very close to that for our Puerto Rican children. For Black children, however, the estimate is 55 percent, and is well above that for our Blacks. The estimate may be a bit high due to differences in patterns for Blacks and for other elements of the population, but the true figure is almost certainly no lower than the average of 49.6 percent for Manhattan as a whole.

Due to the small number of Black students for whom we have data (approximately one-third of those attending the workshop) the low rate of complete families among our students is not statistically different from the area average. The fact that it coincides with a similar deficit in average income for the families of our Blacks, however, lends some credence to the notion that Black children coming to the workshop came from generally poorer backgrounds than is typical of Blacks in the area in question.

The final type of information concerning the children who came which is relevant to this discussion is the testing data discussed in Chapter XII. As can be seen there, the group as a whole and the individual ethnic/racial groups, aside from the Black children, all had average performance IQ scores above the national average for the test standardization sample of White children. For the entire group and for Puerto Rican and Chinese children the difference is statistically significant. Although data on the children in the geographical area from which our children came is not available, it seems very unlikely that minority children in an area with the socioeconomic characteristics which we have previously documented have, as a group, above average intelligence. Whether the Black children who came scored higher than would their peers who did not is not really answerable. As average IQ scores for Black children generally range between 85 and 90, it is altogether possible that our Black attendees were indeed self-selected on the basis of intelligence as well.

Although the evidence for selection of children on the basis of intelligence is quite clear, the way the selection came about is not so clear. One guess is that these children, because of their intelligence, had received reinforcement in school and elsewhere in activities which employed the abilities involved. Such children would probably have higher expectations of success in an activity like film making than would their less adept peers. These expectations might, in turn, enhance a desire to participate.

To recapitulate our findings concerning the nature of the children who came initially to the workshop, then, they differed in a number of significant ways from an average profile of the same-age children within the relevant geographical area. They differed by being 80 percent male, with the discrepancy particularly great among Puerto Ricans and Whites; they differed economically by being generally below median income, while the Puerto Ricans were actually above average for their ethnic group; they differed by being from generally larger families than is typical of the area or of their racial/ethnic group and by coming from later in their respective birth orders than would be expected by chance; Blacks may have been from generally more disrupted homes than is general for their race; and, finally, participants were generally of a higher intellectual ability than would be expected by chance.

A number of possible explanations for some of these unexpected findings have been offered along the way, but a further one remains to be advanced. To place this explanation in context, we now turn to a discussion of the processes which brought children to the workshop.

As already described, the workshop on Ludlow Street was in a retail district with a very low population density. Although it was across the street from a large high school, the junior high school, from which most participants were expected to come, was a quarter-mile away. At the beginning of the 1974-1975 school year the workshop teachers went into several of the English classes, as well as a special class on audio-visual media, at the junior high and described the workshop and its function, inviting interested students to attend after school. This procedure was repeated at the beginning of the 1975-1976 school year. In addition, two groups of students came to the workshop during school hours as part of their school curriculum on alternate afternoons during the Fall of 1974. Of the approximately 25 students who attended during school hours, only seven also participated after school hours. Only one became a regular participant. The recruiting in the school by the teachers led to participation by an additional five to eight children. Three participants from prior years also attended.

Seventy-five to eighty children came to the workshop due to one or more other processes, however. One process, accounting for another small minority of students, involved children who had already become involved in film making, usually as a result of a relative's acquisition of film equipment. For them, participation in an organized workshop was an obvious next step. The large majority of children, however, apparently came as a result of peer or sibling contacts.

In other words, friends brought their friends and siblings introduced their siblings. The small group of children coming initially from the junior high recruiting can be seen as a core group who then recruited others, who, in turn, brought still others. Workshop attendees, then, can be thought of as selected members of one or more extended peer networks which were in themselves quite selective. Seen from this perspective, it is not surprising that the children tended to resemble each other and were not entirely representative of the larger population.

This perspective also suggests another source of selection beyond the self-selective processes upon which we have focused to this point. It is quite possible that the peer recruiters were themselves selective in their choice of whom to bring. In addition to variables such as friendship and respect, the likelihood of success on the part of the recruitee may have played a part in the recruiters' decision-making. This kind of selectivity may account for part of the high level of the IQ scores for the group as a whole. It may also account for the large number of children from large families with their, presumably, well-developed social skills.

The adequacy of this explanation could be partially tested thanks to the natural experiment which developed as a result of the change in workshop location in January 1976. Because the new location was in the heart of a residential area a new type of attendee appears to have begun arriving. These were children who lived nearby and were more curious than committed. Many were probably not part of the network hypothesized above. As a result, these children may be much more typical of children in the area than were those who had come earlier. Unfortunately, time constraints have not permitted to this point an analysis which would test this hypothesis.

The Film Making Process

After an introduction to the workshop, which usually involved viewing a number of workshop films, a discussion with one or more of the teachers and observation of whatever activity was in process in the workshop, the child returned with the requisite permission forms and was tested. This completed, the child was usually given an introduction to film theory and to the editing equipment and techniques through use of the viewer in a way not too different from that employed with the elementary school children and described in Chapter II. The next step usually involved making a practice film--either live or animated. Often both types were completed in a single session. On the other hand, some children got quite involved in their initial animation and spent more than one afternoon working on it. While waiting for the practice film(s) to return from the laboratory, the child was encouraged to think about an idea for a "first" film.

It should be pointed out before proceeding further that, as Table 12 indicates, more than 30 percent of the attendees did not accomplish even these initial steps. Some never returned after testing while others quickly moved into roles in other children's films. Still others attended very irregularly and spent most of what time they were present socializing, film viewing or planning films which never materialized. As indicated in Figure 11, the group with the largest percentage in this group was the Puerto Rican girls. Most of these girls did not return after the testing or initial introduction, again emphasizing how ill-equipped these girls were for functioning in the workshop environment.

For those who progressed to this point, the next step was viewing, editing and reviewing the practice film(s). When possible, a good deal of conceptual as well as practical instruction was provided using the film as a heuristic device. This accomplished, emphasis was shifted to creating a narrative description or story board for the first film. This was generally an individual activity, but for some of the most successful film makers it involved co-authorship. Next, a detailed shot list was generally required. This was used as a means of teaching shot-visualization or imaging techniques and as an impetus to an analytic thinking style.

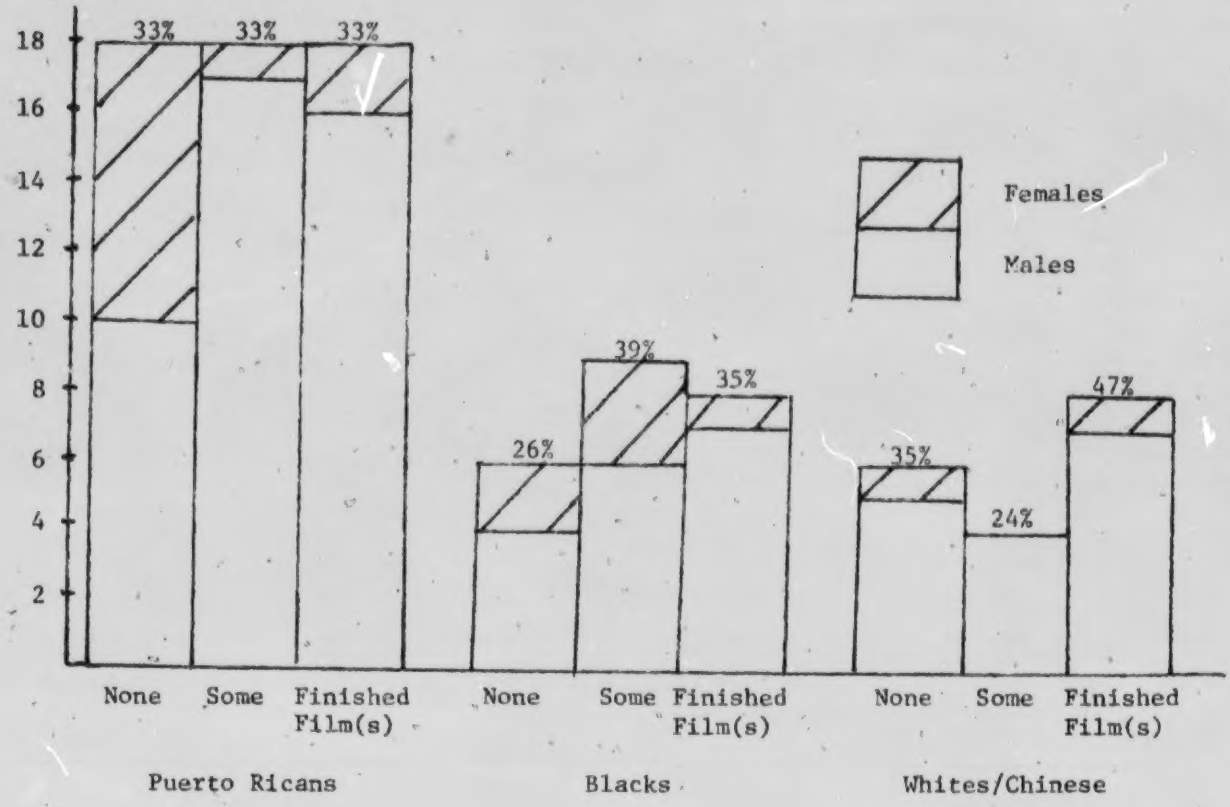

Fig. 11. Number of Children Achieving Various Stages of Film Making by Ethnic/Racial Group and Sex (1974-1976)

Meanwhile, often animated discussions of who would act which parts and of who would be cameraman were carried on with various more or less enthusiastic candidates. In fact, roles were often filled by friends from outside who came solely for this purpose. Logistics of location, costumes and props had to be worked out with the teachers and members of the cast, as did shooting times. Finally, filming could begin. This took anywhere from a single afternoon to several months. With an extended shooting schedule the filming would proceed in parallel with the process of reviewing previously shot material and initial editing. The teachers generally supervised the entire process for at least the first film. A good deal of attention was focused on the editing (again demonstrating the importance of the influence of Eisenstein) and on the potential to drastically alter the basic footage relationships in the editing stage.

With the editing completed, the film was returned to the lab for one or more copies. These, in turn, were sent to have a magnetic sound stripe added along the edge of the film. Sound was then added using a special projector. This was generally done in two stages with background music recorded first and voices and sound effects added later. The completion of this step was generally followed immediately by a general showing at which everyone was expected to watch--sometimes more than once. The film was then placed in a special type of labeled film container generally reserved for finished films. This final step was often accompanied by much good-natured kidding and boasting and was clearly a special occassion.

Having gotten this far, however, we should again return to Table 12, and to Figures 11 and 12. This reveals that the just-described process was navigated successfully by only a minority of children. In fact, the only group to even reach the 50 percent level were the White boys, four of whom produced at least one film. As Figure 12 illustrates, none of the age groups did better than 45 percent. Interestingly, the oldest age group produced the lowest percentage of film makers.

Figures 13 and 13a allow us to compare the productivity of children during the two different workshop periods. The patterns of the distributions for the two periods which are plotted in Figure 13 are remarkably similar when the differences in location, ages and sexual distribution are taken into account. This lends some confidence to the assertion that in workshops operating under the Young Filmakers philosophy and working with poor, minority children, one can expect that the majority of children will not complete a major film. In addition, it can be expected that of those who do complete a film, few will complete more than three and the largest number will make only one.

Figure 13 also illustrates the large discrepancy between the two periods in the success rate for girls. This is probably due both to the younger age of the girls in the earlier workshop and to the more favorable location--at least for girls who could

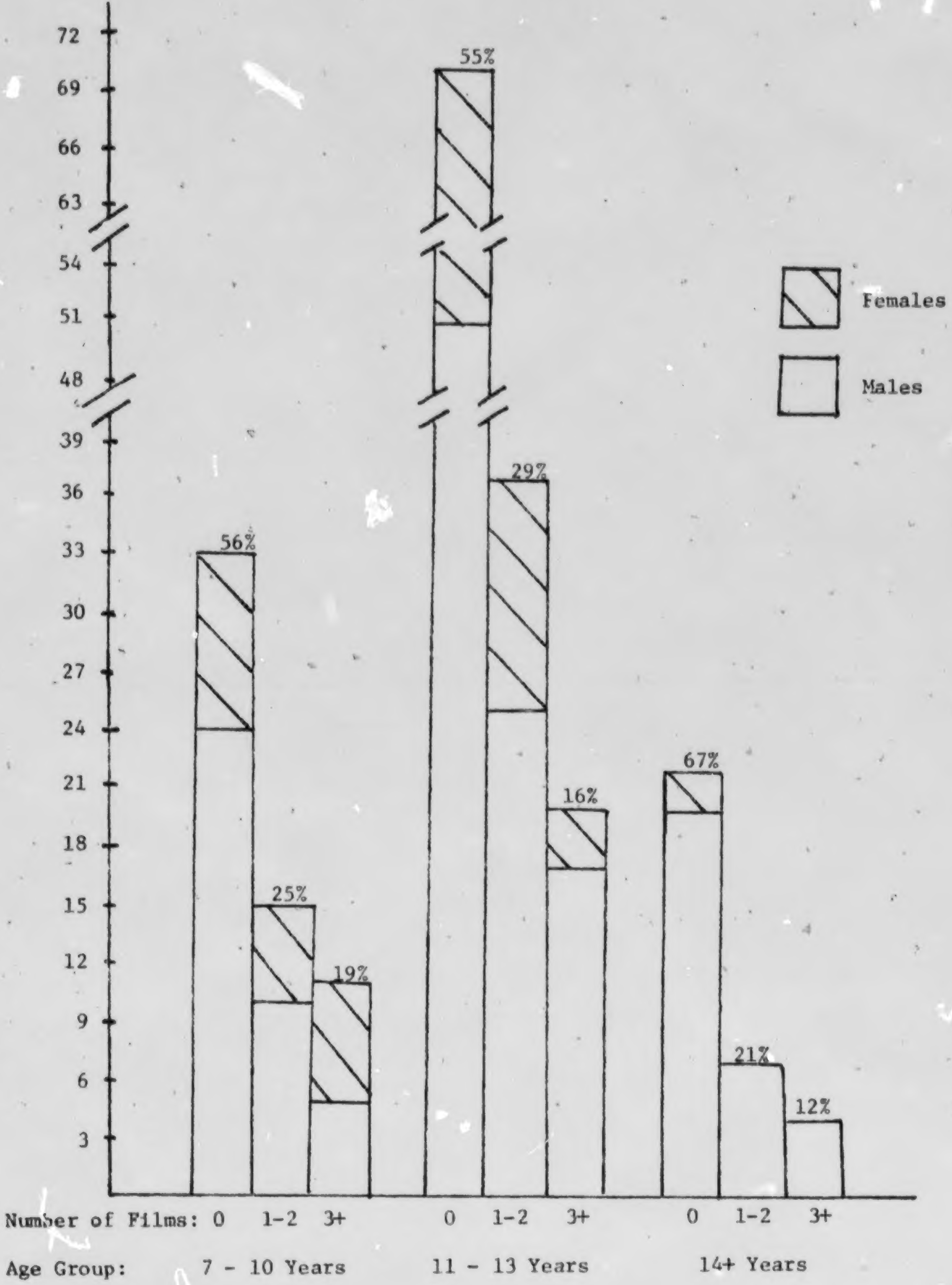

Fig. 12. The Number of Children Who Attended the Workshop by Age Group and Number of Films Completed (1969-1976)

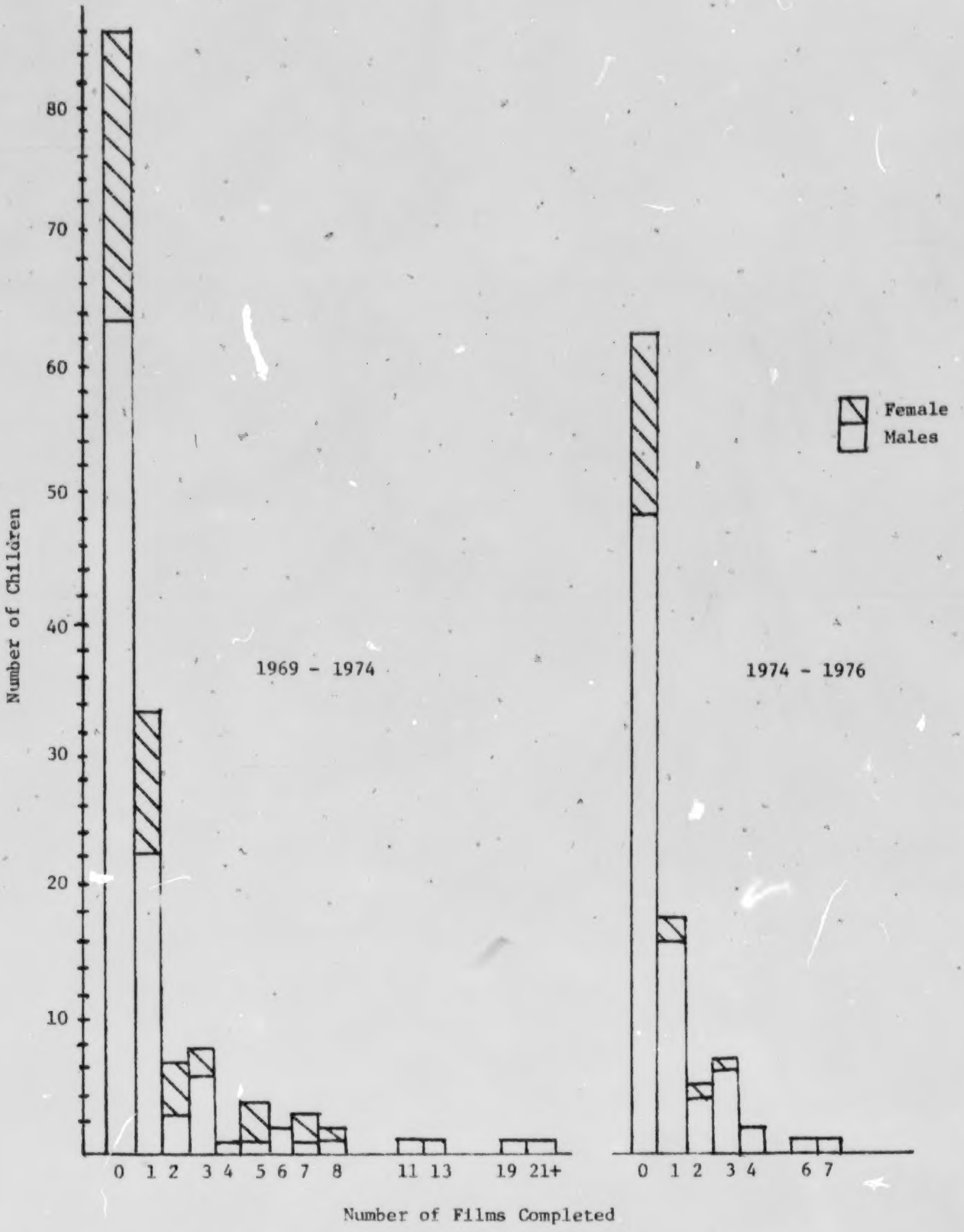

Fig. 13. The Number of Children Who Attended the Young Filmmakers Super-8 Workshop by Number of Films Completed.

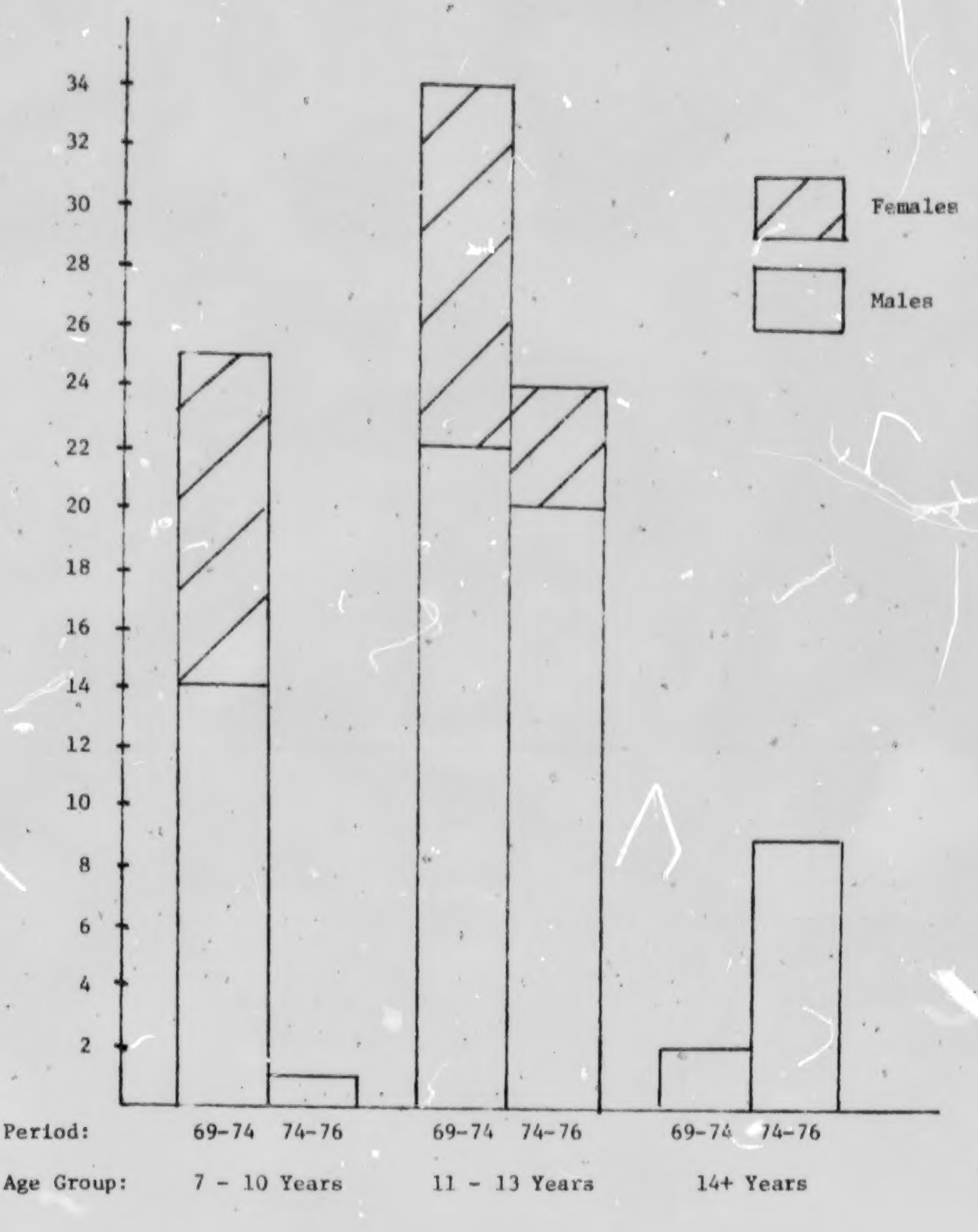

Fig. 13a. Number of Children Who Produced Finished Films by Age Group and Period of Attendance.

be expected to be more secure in a location within their home neighborhood. The other discrepancy illustrated is in the average number of films completed. This difference, which is statistically significant, is probably due in part to the differ age distributions at the two workshops (clearly indicated in Figure 13a). The younger children tended to produce more, but shorter films than did their seniors (Figure 12). The smaller number of films per child may also be related to the shift from the more tolerant missionary-educator phylosophy of the earlier teachers to the artist-educator stance of the later ones. The higher standards of the later period may have sacrificed some quantity for better quality. A third possible factor was simply the shorter period during which the later workshop was in existence--leaving less time for potentially prolific film makers to be creative.

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CHAPTER IX

THE CONTENT OF THE WORKSHOP FILMS

There are multiple ways in which the films produced by the workshops can be described, and we proceed in the following chapters to our various statistical approaches. Before so doing, however, it has seemed useful to us to have our films described in a straightforward way, not by psychologists, but by an expert in film analysis and film making. Because of our association with the Annenberg School of Communications and the students of Sol Worth and Larry Gross, we were fortunate in attracting Michael Griffin to carry out his master's dissertation on some of these materials. He could examine them as an outsider unaffected by our own thinking. The film descriptive parts of his thesis serve the same purpose as the case study in the second chapter. It lays before the reader the essential documents in a fairly intelligible form and makes more illuminating the statistical manipulations that follow. The rest of this chapter then is a slightly edited version of pages 60 to 109 of the Griffin thesis.* (The italics have been added.)

Introduction

Initially ignoring the information I had about the ages, ethnic backgrounds and film experience of each of the children, I have tried to sort the films into groups according to their similarity of style and structure. After many hundreds of hours of viewing, charting shots and sequences, and noting various characteristics, it appeared that there were six categories into which I could successfully group the films.

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* "A study of structure in films made by children," by Michael Scott Griffin, A Thesis in Communications, Annenberg School of Communications, 1978. The thesis was based directly on the films of the project under the arrangement that it would be available for use in final reporting as in the present case.

Group I

The first group consists of films that contain activity without narrative. They are films with little or no characterization, and no apparent structure apart from the organization of the activity being filmed. There is a lack of distinction in these films between the natural and the fictive, that is, between "recording" or "reporting," and constructing. The filming seems to be a part of the children's play, the use of the camera doesn't seem to be differentiated very well from the activity surrounding it. Films from Group I are reminiscent of home movies in the sense that they are not conscious articulations so much as they are "participant observations." These kids seem to be showing something in a movie rather than making a film. Structurally there is little difference between the Group I films and the pre-test films.

There are two films which I have placed in Group I. While many of the films contained sections which would fit in this category only two displayed a consistent lack of any clearly manipulated order or structuring influence on the part of the filmmaker.

Friends, by Carol S, a nine year old, is her first film. It is a series of about twenty shots, mostly medium shots, showing a group of children playing, scuffling, wrestling, and falling over one another. There is no apparent intended sequence to their actions and it appears that little or no editing was done. The only hint of structure is that the final shot seems to exhibit some closure. It shows a boy riding away from the camera on a bike.

The second film is by Jessica R, also nine years old, and it is also her first film. There is a visible attempt in this film to portray some story about two cats--the cats being two little girls dressed in leotards and wearing cat ears--but a lack of editing results in an eleven shot "record" of the two girls playing at being cats. They jump on, around and underneath a table, while a third girl interrupts to read from a sheet of paper, despite the fact that the film is silent. The end product is a sort of home movie of these girls playing at presenting a story.

Both these films have a home movie quality and serve to record activity rather than to present a constructed product. The film-making activity *seems to be part of a play frame.* The conceptual frame in which an artifact is consciously created for an audience seems to be lacking. Neither film has any readily apparent narrative structure and neither has any perceptible sequential pattern. In *Cats*, for instance, shot length varies from less than one second to more than fifty-three seconds with no discernible purpose for such variance.

These films are representative of what I will call the *"home movie" frame* in that they are films that record more than create or construct. As in adult home movies there is performance for the camera, but the film tends to be structured by the performance more than vice versa.

Group II

The second group consists of films with only a small number of sequences. They have *simple, unelaborated narratives*, many of which are repeated by more than one film-maker. Highly conventional, signifying props are used as cues for character identity and location establishment (e.g. a cap for a policeman, a cape for Dracula, cardboard Martian heads, etc.). There is little or no condensation of time; actions portrayed on the screen almost always take as much time as they would naturally. A particularly large amount of the films is taken up with walking, running, scuffling, fighting, going in and out of doors, and up and down the street. Filmic behavior--in the sense that it was constructed and staged for the film--melts into natural, non-filmic behavior. Often the kids seem to be playing with one another and the cameraman, as a participant observer, pushes the button on the camera. The same setting is often used for all the action despite the fact that there is more than one type of event that occurs. It appears that the same kind of makebelieve that allows children to use the same room as a store one minute and a jail the next is at work in their use of one small area to chase the villain around and around in. There are eighteen films that seem to belong in Group II. They are listed in Tables 14 and 15.

Table 14

Group II Films

Film-Maker	Title	Age	Number of Previous Films
Angel M	Boxing	10	0
Richard R	The Cow Robber	10	0
Sonia H	The Creeper	9	0
Elaine C	Desparate Girl	12	1
Rose G	The Doll	10	0
Orlando B	Dracula Kills a Woman	9	0
Edwin R	End of the World	8	3
Edwin R	House of Vampires	7	0
Rose R	Hungry Monster	13	0
Maria C	The Lost Girl	8	0
Carmen R	Marriage Movie	12	3
Carmen R	The Murder	11	0
Margarita H	Story of Dracula	7	0
Carol S	Three Girls Who Get Killed	11	2
Harry N	Vampire Who Hides in a Tree	8	0

Table 15

Group II Films Made in Central Park

Film-Maker	Title	Age	Number of Previous Films
Sonia H	Baron Blood	12	4
Richard R	Monster in Central Park	11	3
Rose R	Teenage Werewolf Dies Again	14	3

It is clear in these films that the film-maker is attempting to organize actors and impose a narrative structure in a general atmosphere where children are playing with one another and there is a lot of what Chalfen (   ) called "look at me" performance for the camera. The end result, however, is not simply a testimony of the difficulty children experience in organizing the various aspects of film-making. The camera tends to be purposefully directed towards playful activity, towards moving, chasing and fighting, and footage of this kind of activity is not eliminated in the editing process. The moving action actually seems to provide a central focus for many of the films. In all of the Group II films shot and sequence structure are centered around attention to movement. Cutting from one stationary object to another is very rare. Cutting from one perspective to another on the same object is virtually non-existent. Cutting back and forth from long shot to medium shot or to close-up for purposes of directing attention or creating a visual rhythm does not occur. Cutting from one location to another is unusual. Each shot and each shot transition tends to be focussed on a movement to or from some point where attention has been or is being directed.

The most common type of shot in Group II films is a following pan. In several of the films well over half of the shots are connecting and following pans. Attempts to incorporate the conventions of other Hollywood-TV style editing techniques are evident. These include attempts to match cut continuous actions and rough attempts to cross cut pursuer and pursued in chase scenes. But none of these are mastered nor integrated so thoroughly as the tendency to follow movement as a transition for changing location, for introducing characters, and for linking the events of a narrative. Thus, the active, physical movements that are so integral to the culture of children, play a two-fold role in the Group II films. On the one hand the activity provides a large amount of the content that the children are interested in showing, and on the other hand, it is an element of the structure by which transitions are made and the films are sequenced.

Like The Lost Girl, these films are simple stories with stereotyped characters Sutton-Smith recognized that many of the films displayed the same recurring themes and the same kinds of story concerns ( ). The introduction of villainy and then the negation of it, for instance, or the threat of danger with its subsequent escape or demise, are present in an overwhelming number of these films. In some cases there are several films with identical stories, like the four "vampire movies."

My intention, however, is to show that there are important similarities to be found in addition to these common themes. The most important finding in an investigation of media manipulation is not so much that the same narratives are used or that the same themes recur, but that the content and form of the films are being structured in the same way. It appears, in fact, that the ways in which this sample of children manipulate and organize film is a result of tendencies to structure which involve more than just the structure of narrative. The different film groups seem to represent varying levels of familiarity with the film medium, different conceptual "frames" in which the children construct and manipulate this particular form.

Consider the four vampire movies. Each of them has a story line consisting of:

--somebody doing something,
--a vampire coming and biting them,
--the vampire being found and killed.

In each case this skeletal narrative structure (a structure which consists only of the introduction of a character or characters, the introduction of villainy, and the negation of the villainy: C --> V --> NV) is used as a basis around which to sequence the performance of certain actions that seem most important to these children. For the children who made the films in Group II, the majority of whom are making their first films, the most important activities appear to involve physical movement: walking, running, chasing, scuffling, wrestling, fighting, going in and out of doorways and up and down streets. The "somebody doing something" which serves to introduce the first characters, usually involves showing these characters walking along the street.

Story of Dracula, by Margarita H, is representative of this propensity to show certain prominent actions repeatedly. In the case of Group II films these actions are sequenced around a story despite the fact that there is sometimes very little relationship between the actions and the story.

Story of Dracula
(silent)

1 MS* Dracula walking. (Dracula is identified by the mask and cape he is wearing.)

2 MS Dracula walking in door.

3 MS to LS Dracula walking down a hall away from the camera, then turning to face the camera.

(This walking and establishment of Dracula takes exactly 30 seconds.)

4 MS Casket-like cabinet with the lid jiggling. (2.5 seconds)

5 MCS Boy and girl walking out door.

6 MLS Boy and girl walking down sidewalk.

7 MS Boy and girl walking in a door.

8 MS to LS Boy and girl walking down the hallway to where the casket-like cabinet is situated.

(This walking and establishment of the boy and girl takes exactly 20 seconds.)

LS to MS Boy and girl running back towards camera with Dracula chasing them.

9 MLS Dracula chasing them on the sidewalk. They run into a doorway.

(The running and chasing, the establishment of the menace takes 10 seconds.)

10 MS Dracula stops at doorway they escape through, turns, and slowly walks back past the camera to the original door. (10 seconds)

11 LS Dracula (inside) walking down the hallway away from the camera. (10 seconds)

12 MS Dracula stands looking at the camera, then sits down in "coffin." (4 seconds)

(In this 24 second section Dracula is parading and posing for the camera.)

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* CS = Close Shot
MCS = Medium Close Shot
MS = Medium Shot
MLS = Medium Long Shot
LS = Long Shot

13	MS	Boy and girl come in door and talk to a woman (mother). (10 seconds)
14	LS to MS	Dracula rises out of "coffin" and walks towards the camera. (10 seconds)
15	CS	Dracula walking past the camera. (3 seconds)
16	MS to LS	Dracula walking up to the boy lying on a bed, leaning over him, appearing to bite him and running back past the camera and away down the hall. (9 seconds)
17	MLS	Dracula standing in the "coffin" facing the camera, then stooping into the coffin. (4 seconds)
18	MS	Girl waking mom and showing bitten brother. (10 seconds)
19	CS	Bitten boy. (2 seconds)
20	MS	Mother and sister go to door and pull in a boy with a policeman's cap on. He walks over and looks at bitten boy. (16 seconds)
21	CS	Policeman stands over bitten boy. (7 seconds)
22	MS	(jump cut) Policeman and girl run over to coffin, kick open the lid and policeman drives a stake into the vampire. (17 seconds)
23	CS	Mom strokes boy's head, he gets up, gives mom a long hug. (13 seconds)
24	MCS	Boy rubs neck and talks to girl. (13 seconds)

Story of Dracula is 3 minutes, 20 seconds long. Of that time, about a minute and a half, or a little less than fifty percent of the film, is spent showing characters walking or running around. Characters tend to be shown "parading" before the camera, and this excessive movement often appears to be unrelated to the structure of the narrative. The predominance of such "parading" in most of the Group II films suggests that the desire to follow various kinds of movement with the camera equals the telling of a story in importance for these children. This may be one of the reasons why children working in the same workshop often did not bother to use new and different plots for their films but simply repeated the same popular themes. It is certainly a powerful influence on the sequence structure of these films. Sequences are invariably structured around moving actions.

Films like Dracula Kills a Woman, House of Vampires, Vampire Who Hides in a Tree, The Cow Robber, The Creeper, The Doll, End of the World, Hungry Monster, Marriage Movie, and Three Girls Who Get Killed all tend to exhibit a similar organization of shots and sequences. Each film is made up of what I will call "motion-directed sequences," and while the number of these sequences in each film may vary, the nature of the sequences themselves and the way that they are connected varies only a little. Consider The Story of Dracula as a series of motion-sequences.

Story of Dracula
(Sequence Structure)

1. Establishment of Dracula. (30 seconds)	1 2 3 4	Dracula walking with following pans. (medium and long shots)
2. Establishment of the protagonists. (20 seconds)	5 6 7	The protagonists walking with following pans. (medium shots)
3. Establishment of Threat. (10 seconds)	8 9	The protagonists walk to the point of attack and then flee, chased by Dracula. (medium and long shots)
4. "Parading" of Dracula and reemphasis of his presence. (24 seconds)	10 11 12	Dracula parades in front of the camera with following pans. (medium and long shots)
5. Establishment of mother. (10 seconds)	13	Kids walk over to mother with following pans. (medium shot)
6. Villainy perpetrated. (26 seconds)	14 15 16 17	Dracula walks to where the boy is, bites him, runs away, and walks back to his coffin. (LS - MS - CS - MS)
7. Discovery of Villainy. (35 seconds)	18 19 20 21	Girl wakes her mother, they see the bite, walk over to the door and fetch a policeman who walks over to the boy. Following pans. (MS and CS)
8. Negation of Villainy. (17 seconds)	22	Cop and girl run over to the coffin and kill Dracula. (MS)

9. Recovery	23 Mom and boy hug. Boy rubs his neck and talks to his 24 sister. (CS and MS)

The first eight sequences are motion-directed sequences. Only the ninth isn't. Separate sequences seem to be divided by direct cuts. Within each sequence, however, the shots seem to be organized by movement to and from locations and by the movement associated with a particular event. The Group II film-makers seem to have no conception of cutting directly from one image to another to produce a composite effect.

Charting the rest of the Group II films provides a consistent similarity. Below are some examples.

Dracula Kills a Woman

1. Establishment of a girl. (53 seconds)	1 A girl cleaning, straightening 2 and moving around, then lying 3 down to sleep. 4 Following pans. 5 (Medium shots)
2. Establishment of Dracula. (25 seconds)	6 Dracula appears out of a cabinet and walks around. Following pans. (MS to CS) 7
3. Villainy perpetrated. (10 seconds)	Dracula walks over to the 8 girl and bites her. Voice 9 over "Oh my neck!" (MS to CS to MS)
4. Establishment of Dracula and the girl as allies. Location change. (42 seconds)	Dracula and the bitten girl 9 walk out into the street, along 10 the sidewalk, down an alley up to a truck and stop. (An in- 11 ordinately large amount of 12 walking.) Following pans. (Medium and long shots)
5. Villainy compounded. (44 seconds)	Girl turns and walks away from Dracula, walks over behind a 13 kid standing on the sidewalk 14 (following pan) and bites and 15 kills him. She then walks away 16 from the victim back towards 17 Dracula (following pan) and a kid in a policeman's cap imme- diately comes into the frame

		and follows her. When she gets back to where Dracula is standing he runs past her and grabs the cop. They kill the cop and stand over the corpse.
6. Negation of Villainy. (16 seconds)	18 19	Two cops run up the alley towards the camera and shoot Dracula and the girl. The bodies are shown lying in the street.
7. Closure. (23 seconds)	20 21 22	The cops pick up the bodies and carry them away up the alley.

Titles.

All seven sequences in this film are structured around moving action. Usually this involves the presentation of an event, character, or object by following the action of a character to and from an event or object. Attention is directed through the movement of actors rather than through a careful use of camera angle, composition or editing. Transitions are also accomplished by following action. The use of the straight cut is very rare. The use of a following pan to connect one location or event to another is much more common.

These patterns of structure are not limited to films about vampires, however.

The Cow Robber

1. Establishment of a man with a cow. (3 seconds)	1	Man walks toward camera with a cow on a leash. The cow is a little girl on her haunches wearing a papier mache cow head.
2. Villainy perpetrated. (19 seconds)	2 3 4 5	The man is attacked by a robber who hits him over the head and leads the cow away. (CS of unconscious man)
3. Establishment of the robber with the cow. (9 seconds)	6 7	Robber ties the cow's leash around a park bench, then sits down on the bench. (Long medium shots)
4. Recovery and counter attack by the owner. Reversal. (52 seconds)		LS of man getting up, looking around, stealthily circling

around the small park toward
the camera and the robber. He
8 starts shooting at the robber,
9 then they scuffle in MS, the
10 man throwing the robber down
11 and flailing him with punches.
12 A LS of the man throwing the
13 robber down again and kicking
14 him. Finally a MS of the man
standing over the robber and
a tilt down to show the robber
lying on the ground. Man steps
over him and walks over to the
cow and unties it.

5. Re-establishment of the man with his cow. Parading. (54 seconds)

Long lasting following pans
of the man leading the cow
toward, past and away from the
camera. The camera follows
them as they walk back and
15 forth. The man looks into the
16 camera and points his gun. He
17 kicks the cow to get it to
move the right way, the cow
kicks back. Close shots as
the camera tracks with them.
Movement from close to long
shots as they move towards
and away from the camera.

The convention of showing the victim of an attack in close-up is one of the media-influenced conventions that can be seen creeping into most of the Group II films. These close-ups are particularly noticeable because they are interjected into a structure that makes very little use of sudden transitions from one focal length to another. Films like The Marriage Movie and End of the World, which were made by more experienced film-makers, exhibit a great deal more direct cutting and use of close-ups.

The Group II films contain some of the same structural features found in an average television show, especially the tendency to parallel the actions of protagonist and antagonist as they approach a point of contact. But the preoccupation with movement for its own sake, and the predominance of motion-directed sequences, contrasts with the more conventional practice of quick-cutting between locations, faces, objects and actions. These films seem to represent loosely controlled attempts to present a *simplistic narrative by following and recording the movements of actors who are playing make-believe. The Group II films represent a stage where the organization of the activity itself still dominates over the film-maker's attempts to impose a cinematic organization*.

Looking back to the list in Tables 14 and 15 we find that the film-makers in this group vary widely in age. While a majority are between nine and twelve, there are five films made by seven or eight year olds, and two films made by a film-maker who was over twelve. In terms of film-making experience, however, the group is much more uniform. If we set aside for the moment the three films for which children ventured out on expeditions into Central Park, we find that all but two of the films are made by children with little or no film-making experience.

The three Central Park films, *Baron Blood*, *Monster in Central Park*, and *Teenage Werewolf Dies Again*, plus a fourth, *Desperate Girl*, are representative of a transitional stage in that they all exhibit typical Group II action narratives but attempt to present the narratives in a more naturalistic setting. They were made by older children, eleven through fourteen, with a generally larger amount of film-making experience. They seem to be examples of what Sutton-Smith has described as a sacrificing of a level of content, or narrative complexity, in the attempt to acquire new technical competencies. In this case the new technical competencies involved the ability to organize a film-making expedition into less familiar and less controlled surroundings.

In conclusion, it seems likely that the similarity of style and structure in the Group II films is related more to social activity and film-making experience than it is to cognitive stages of development. This type of film is the most common product constructed by children with little film-making experience regardless of age.

Group III

A third category is made up of films which are centered around the use of some special technical effect. Some of them contain aspects which are characteristic of other categories but these aspects tend to be overshadowed by the central dominance given to some bit of technical trickery.

Table 16

Group III Films

Film-Maker	Title	Age	Number of Previous Films
Elizabeth B	The Cookie Show	13	0
Margarita H	I Dream of Jeanie	9	3
Jon D	The Magic Stick	11	3
Eliot F	The Playful Phantoms	15	0
Carol S	Roach Killer Shoes	13	5
David M	Twin Magic	12	5

Narratives are generally no more complex than in Group II films but the discovery of some tiicky manipulative power that can be played with seems to be an inducement for some children to more consciously organize formal elements. In The Cookie Show the narrative consists of nothing more than a girl sitting down to play with a deck of cards only to have the cards disappear and reappear each time she looks away. The initial sequence, which shows a girl walking into the frame, getting herself a drink, and sitting down with a deck of cards, merely sets the stage for the cards to be pulled off the table so they can pop back into place after the next cut. This disappearing and reappearing sequence is repeated twice and the film is over. Yet even though the film only has ten shots the use of this technical illusion requires a more careful constructuon of direct cuts than were displayed in the films of Group II.

Roach Killer Shoes could have been classified as a Group II film. The first four minutes of this five minute film are constructed with motion-directed sequences and twenty of twenty-six shots are following pans. But the first four minutes of the film merely set the stage for the final minute's action. In the first four minutes two pairs of children are followed as they approach, confront, and fight each other, leave, renew their conflict and fight again. This all takes place on the rooftop of an apartment building. In the middle of the second fight one of the children is pushed off the roof. The portrayal of this fall is the most carefully constructed event in the film, a swirling shot of sky and buildings synched with a scream that provides not only the focus of the final minute but the gimmick around which the entire film is centered. A shot of the child being pushed at the edge of the roof, an abstract shot of swirling sky and buildings, and a shot of the child on the ground far below are cut together tightly to give a convincing illusion of an actual fall. This falling sequence, like the disappearing cards in The Cookie Show, requires a more conscious manipulation of the medium.

The Playful Phantoms solves the problem of setting the stage by starting the film with a written story. The first seven shots are printed titles that establish a narrative so that the first live action can begin with phantoms popping in and out of the frame. Since we know from the narrative that the phantoms are attempting to chase a new heir off their estate, the film continues as a simple series of phantom appearances and harrassments. The narrative structure of the live action is disjointed but since the content of the story was supplied by the use of the printed titles there is no need for the action to supply transitions, background, or explanations. The rest of the film is structured completely around the cuts that are necessary to make the phantoms pop in and out of the frame. Out of a total of seventy shots there are only five following pans.

The Magic Stick and Twin Magic are similarly constructed around the cuts necessary to pop people out of the frame. The narrative in The Magic Stick consists of a boy finding a stick that will make things disappear then using it to eliminate people, objects and finally his friend by mistake. Twin Magic is more involved. In it the same actor plays two characters and there is an explicit attempt to moralize about the abuse of power. After a skilled magician teaches his twin brother the secrets of his magical powers his brother abuses those powers by making too many people and objects disappear. Because of the abuse he forfeits his powers.

Twin Magic is the most successful of the Group III films at integrating the use of trick cuts into a coherent narrative. It could possibly be considered a Group VI film but the use of trick cuts for popping in and out is so dominant that it appears the main purpose of the film was to play with this bit of trickery.

I Dream of Jeanie is television inspired but is not modeled after a television structure. This film is constructed around the attempt to use trick editing for the purpose of showing a girl appear out of a bottle. Filmed at the beach, a boy finds a bottle in the water. The film-maker uses animation techniques to make the bottle jump around and then, but cutting at a point in which sand was being sprinkled in front of the camera, produces a girl in the frame next to the bottle. A loose narrative is constructed around two sequences of "Jeannie" appearing and disappearing. The film represents both a move to establish more naturalistic settings and a carefully planned attempt to use editing for more imaginative purposes.

The manipulation of cinematic techniques for illusory purposes is one of the ways that the children seem to become more conscious of formal organization and construction. The concentration on trickery that can be seen in the films of this group is not confined to any particular age level nor is it a characteristic of experienced film-makers only. But there may be some reason to believe that the ability to integrate the manipulation of technical effects with a coherent narrative structure requires the skill of a more experienced film-maker.

Group IV

The films in the fourth group are marked by a move away from a reliance on overt signifying props, printed narratives or special effects, and a move toward the establishment of more naturalistic settings and more relaistic film action. The concern for making the films seem realistic is accompanied by the use of clear straightforward narratives and attempts to model the films after conventional television genres.

These films are more clearly fictive in the sense that they are more clearly controlled constructions. Narrative structures are more complex than in the films of Groups II and III.

Table 17

Group IV Films

Film-Maker	Title	Age	Number of Previous Films
John N	The Addict	12	0
Carl J	Bag Full of Sorrows	13	0
David M, Jimmy L	The Detective	12, 12	1
Jose M	A Friend in Need	15	0
Jose B	Kung Fu	14	(several)
Maria L	Mary's First Friend	13	0
Maria C	The Picnic	13	0
George N	Stop Before Starting	15	0

These film-makers, unlike those if Group III, are most concerned with presenting a story and doing it in a realistic fashion. The notion of creating a film for an audience seems to exert a greater influence than in the films of the first three groups. The action in these films is more completely and purposefully manipulated. It is not effected so much by more natural play activity. The filming frame is not confused with play frames as is often the case in Group I and Group II films. The attempts to create more natural settings, and the greater degree of control exerted over the activity before the camera, are symptomatic of a consciousness about constructing for an audience.

While for some of the children in the first three groups the making of the film was treated as play, and there was therefore more interest in doing the film-making than in showing the film to anyone, the film-makers in Group IV seem to be taking an interest in making a film that they would want to show to people. In most cases making a film they would want to show to others means incorporating television conventions and popular television themes.

The Addict, by John N, has a common police show narrative about a drug addict who is victimized by an evil and greedy drug pusher. The addict dies after being given some bad drugs and his brother avenges his death by killing the drug dealer. The film ends with the arrest of the addict's brother and the typical command, "Let's go downtown!" As with most of the films in Group IV the core structure of a television narrative is stripped of its various subplots, elaborations and long-winded conversations, and then presented in condensed form. Despite the fact that these film-makers are still preoccupied with showing movement from one location to another, they are able to present a good facsimile of a television narrative in five minutes. The film can be broken down into the following sequences.

The Addict

1. Establishment of the addict. (13 seconds)	1 2	A high angle LS of a kid staggering along the sidewalk. (High angle long shots of the street or sidewalk are a typical establishing convention.)
2. Establishment of the dealer. Change of location. (1 minute and 13 seconds)	2 3 4 5 6 7 8	A motion-directed sequence with seven shots of the dealer and addict moving through the streets to the dealer's apartment. Dialogue with the dealer telling the addict that he'll "fix him up good."
3. Establishment of villainy (drugs). (41 seconds)	8 9	Dealer gives the addict the drugs, takes his money and pushes and kicks him out the door.
4. Villainy kills. (39 seconds)	10 11 12	A direct cut to a change of location. High angle LMS of addict in a stairwell. He shoots up. There is a cut to an out of focus jiggling shot with swishing pans of the street environment, tilting up and down, then going blank. The next cut is to a CS of the addict lying face down on the sidewalk.

5. The funeral. Establishment of the addict's death and the establishment of grieving friends. (47 seconds)	CS zooms back revealing three men standing with hands folded and dressed in overcoats. Camera then pans to reveal a 13 grave, then cuts to a CS of 14 the headstone, then cuts to 15 an extreme low angle close shot 16 of a silhouetted man looking 17 down and pans to reveal each of the other two. Then there are long shots of the men slowing walking away. (Foreboding music)
6. Establishment of an avenger. (44 seconds)	Several shots of the addict's 18 brother roaming up and down the 19 sidewalk asking people where 20 to find the dealer. Again we 21 find cuts from LS to CS and 22 there is also some reversal 23 cutting from CS to CS as the brother talks to people and they respond.
7. Victim avenged. (39 seconds)	Cut to a CMS of dealer sitting 24 in his apartment. He answers 25 the door only to be knocked 26 down, beaten and killed by the addict's brother. Medium shots.
8. Police apprehend the brother. (35 seconds)	LS of the outside of a door from across the street. The door opens and the brother comes out onto the sidewalk. Two 27 guys run up and grab him from 28 both sides. MS of them question- 29 ing and frisking him. CMS of brother leaning on a car while the cops are frisking him, then they push him back in the door that leads up to the dealer's apartment.
9. Discovery of the dealer's body and arrest of the brother. Tragic conclusion. (21 seconds)	Cut to the three of them coming up the stairs at the camera. Cut to a MS of the apartment door from the inside. It 30 immediately opens and they come 31 bursting in, stand over the 32 body and the brother says, "He killed my brother." The cops say, "You're under arrest. Let's go downtown." They push

him back out the door and
the door closes.

Titles.

The narrative structure is more complex here than in the films of Groups II and III. Rather than a structure of Character → Villainy → Villainy Nullified we have a character victimized by villainy, and then an avenger who murders and becomes a tragic figure. There is no reversal of the villainy, rather the villainy is tragically compounded. The structure is sort of convoluted, repeating the perpetration of villainy in such a way that both good and evil suffer. There is still a preoccupation with walking up and down the street and with fighting, but the more complex narrative is combined with a more tightly edited construction and the film's structure is not determined by movement back and forth.

Some of the other Group IV films are more heavily preoccupied with fighting and some of them are structured around movement nearly as much as the Group II films. But they all differ from Group II films in their attempt to present convincing naturalistic scenes.

In Kung Fu, by Jose B, twenty out of twenty-four shots are following pans and a large section of the film is filled with running, chasing, scuffling or fighting. But there is an attempt to make props less artificial and there is a closely controlled parallel construction to the chase scenes. The hats of the men fit and appear appropriate. The sheriff is identified by his gun and bullet belt and not by a badge or some other more overt signification. The cutting back and forth between pursuer and pursued, and the cuts in the bar between the barmaid and the men drinking are similar in the kind of parallel constructions characteristic of television. Music for the sound track was selected with care so that its rhythmic qualities reinforced the chasing and fighting. While the activities of a "kids' culture" are still a dominant aspect of this film these actions are incorporated better into the film's narrative and formal structures and do not encroach on them.

The Detective, by David M and Jimmy L, is a naturalistically staged film with a simple plot that is clearly modeled after television detective dramas. Again, walking up and down the sidewalk and fighting are the most common activities portrayed. In this film, as in Kung Fu, A Friend in Need and others, kung fu type fighting seems to be particularly popular. The film begins with a typical following pan of a guy strolling along the sidewalk, and this sets the pace for a very movement-oriented film. Thirty-five of forty-two shots in this film contain following pans. It, again, has many of the characteristics of the Group II films. The film is structured so that a great deal of fighting can be shown. But the attempts to provide a natural looking stage for the actions is evident, from the office type appearance of their police station to their use of a lobby and a set of revolving doors to portray a hospital. The narrative structure is like that of a typical television show but with the plot elaboration that television might present replaced by fighting sequences. The film can be characterized with the following scheme.

-- Introduction of hero
-- Hero meets villain (fighting sequence)
-- Villains are locked up
-- Villains escape (fighting sequence)
-- Villains challenge hero to take revenge (fighting sequence)
-- Villains defeat hero by ganging up on him
-- Hero finally vanquishes villains (fighting sequence)
End

A Friend in Need, by Jose M, has a very nearly identical structure.

-- Introduction of heroes (they are followed as they run)
-- They help someone being beaten by villains (fighting sequence)
-- They practice their kung fu (fighting sequence)
-- Villains take revenge by capturing one of the heroes (fighting sequence)
-- Other hero comes to his rescue (fighting sequence)
-- The villains are defeated
End

It also incorporates the television convention of cutting back and forth between close shot and medium shot on characters during the kung fu practice scene.

Stop Before Starting has a narrative in which the heroine gets killed. It seems to profess a moral that if you get mixed up with criminals you're bound to get hurt. It consists of naturalistic street scenes, and displays many common television conventions. Among these are: a cut from a shot going in a door to a shot looking down at the door from the top of stairs inside; cross cuts between the heroine and the men who kill her during their confrontation, including very low angle shots of the men to emphasize their threat; looking up and down the street with reverse angles; movement of the camera to indicate a drug high.

The Picnic, while not modelled after a particular television genre, is another attempt to set a naturalistic stage and use cuts in a better controlled construction. The story is simple and the film is short. It is a construction of four short sequences.

-- Two boys walk into a picnic scene where two girls have a blanket on the ground and are drinking beer. (30 seconds of "picnicking")
-- One boy makes a pass at one of the girls. The other girl pulls her friend away and accuses her of trying to steal her boyfriend. (22 seconds)
-- The camera follows the hurt girl away from the picnic to a bench where she cries, then follows her boyfriend in LS as he runs over to her from the blanket and talks to her. There are cuts to closer shots as he continues to argue and plead with her. (31 seconds)
-- The four of them are shown walking arm and arm for 37 seconds with following pans and reversal cuts. They are shown walking away from the camera, then towards the camera, etc.

While movement is still the central focus the use of more economical cuts is apparent, and the use of props to signify characters gives way to a concern for a convincing naturalistic stage.

Mary's First Friend is also very simple and spends most of its time showing people walking. But it is a clear story in an almost cinema-verite style. The first minute is completely taken up with Mary strolling alone around a small park. The next fifteen seconds she is sitting on a park bench as other people walk by. The next minute establishes three boys who are pitching pennies nearby. A zoom in to a close up of one boy retrieving the pennies alerts us to a dispute about where their position had been. Two of the boys begin to beat up on the third thinking he has cheated. To this point the entire film has been constructed with medium shots but now it switches to a series of close shots, zoom-ins and close-ups of faces to depict the fight and Mary coming to the aid of the third boy in a style that is more intimate and remindful of conventional television fight scenes. The other two boys run away and Mary and the third boy are shown for thirty seconds walking away arm in arm with a close shot of them kissing interjected. Over two and a half minutes of this three minute, forty-five second film is taken up with walking and fighting yet the conception of film-making is clearly different here than in a film like The Story of Dracula. This film-maker is concerned with making the events look realistic, that is, making them look like they would on television.

Bag Full of Sorrows is another street scene film with a concentration on movement that is similar to Group II films. Nearly the entire film consists of movement up and down a sidewalk. Like Stop Before Starting it warns against getting mixed up with anything illegitimate and tends to express a fatalistic view of the power of the criminal to win in the end.

A boy sees a man running up the sidewalk drop a bag that he discovers is full of money. He decides to use the money to buy himself some new things but he is discovered by the man coming out of a store with a new coat on, chased down the street and killed. Another man who discovers the body in a parking lot is arrested for the murder.

Bag Full of Sorrows could be compared to Desperate Girl in that they both seem to represent a kind of transition stage between Group II and Group IV. Both of them concentrate on moving, running, and chasing up and down the street, and on the use of naturalistic characters and settings. But the narrative in Bag Full of Sorrows is clearly developed while Desperate Girl is almost remindful of a Group I film in its lack of narrative structure.

The great concern for naturalism and realism that is characteristic of all Group IV films seems to be something that is most prevalent among those of junior high *age*. While 24 out of 26 of the films in the first three groups were done by children from 7 to 13, 17 of them by children less than twelve, all of the film-kakers in Group IV are between twelve and fifteen. It may well be that a concern for realistic representation occurs across various forms and media at a certain age level due to particular patterns of socialization, although research on children's drawing would seem to indicate that this occurs earlier than junior high.

Mnnipulation of the film medium, on the other hand, seems to be more a function of training and experience than it is of age. Thus there are nine year old film-makers, like Margarita H, using sophisticated editing techniques to produce a genie out of a bottle, and there are fourteen year old film-makers, like Rose R, attempting to use "on location" settings but only for very simplistic narratives, narratives that consist of a mere "recording" of performatory movement.

Group V

The fifth group contains films which are even more overtly manipulations of television and movie models. A reliance on duplicating a television genre, along with the desire to be clever and funny, are the most pronounced characteristics of these films. In some cases there is a self-conscious resistance towards taking the film-making seriously and in these cases parody is the common product. There seem to be two options for adolescents who are subjected to strong peer group pressures and feel self-conscious about their films: Either make a very realistic copy of a familiar genre as in Group IV, or make a parody or caricature of it as in Group V. One of the Group V films seems to start out doing the former but lapses into the latter by the end.

Table 18

Group V Films

Film Maker	Title	Age	Number of Previous Films
David M	The Bionic Kid	13	6
Jon D	Channel 6 News	11	0

Carlos V,	It	13,	3
Eddie W	The Mad Sniper	13	
David L	A Night of TV Watching	14	0
Carlos V,	Wrong Way to Make a Movie	13,	1
Eddie W		13	

Channel 6 News is a 30 second parody with "Bert Beautiful" giving a special report. There is a facsimile of a news studio--with table, chair, map, cup of water and Channel 6 News logo--that has been set up. There is a total of four shots, all stationary, one of the logo, two of Bert Beautiful and one of a Washington correspondent. The framing of the reporters is very conventional.

A Night of TV Watching is a series of parodies on several different television shows with lampooned commercials interjected between programs. While the content is determined by the particular program being made fun of the form seems to be most influenced simply by the attempt to condense several different parodies into a short period of time.

The Bionic Kid is an attempt to duplicate the bionic themes of television shows like The Six Million Dollar Man and The Bionic Woman. The end product is a caricature of its television counterparts more than a parody or a replication of them. The film-maker, David M, had made se eral special effect films prior to this one and certainly he must have seen this film in part as an opportunity to experiment with some new special effects.

A comparison of The Bionic Kid with scenes from the television show The Bionic Woman reveals the extent to which television models are an important influence. In The Bionic Kid a narrator establishes the story in the beginning and by the thirty second point two "bionic kids" are being paraded out and a cellophane type material is being peeled off of them. Beginning with this first scene conventional television editing is used in several places. Usually this consists of cross cutting between medium shots of some character or activity and medium shots of the bionic kids, with close-ups of each of their faces interjected. Below is a comparison of a section of

The Bionic Kid with a section from an episode of The Bionic Woman.

The Bionic Kid
(excerpt)

1. MS to LMS of scientist walking, following pan and zoom out.
2. MS of two bionic kids wrapped in plastic.
3. LMS of the scientist pulling the plastic off the legs of one of the bionic kids.
4. CMS of the scientist pulling the plastic off each of them.
5. CS of a control box on which the scientist is pushing buttons.
6. CS of the first bionic kid walking stiffly.
7. CS of the second bionic kid walking.
8. MS of the scientist and both bionic kids.
9. MCS of the scientist putting the control box away in his pocket.

The Bionic Woman
(Short scene beginning immediately after a commercial break)

1. CS of a computer control panel, zoom back to MS of same.
2. MS of scientist.
3. MS of scientist, "Benny," and the Bionic Woman.
4. MS of the scientist and Benny.
5. MS of the Bionic Woman.
6. MS of the scientist and Benny.
7. CS of the Bionic Woman.
8. MS of the scientist.
9. CS of the Bionic Woman.
10. MS of the scientist.
11. CS of the Bionic Woman.
12. CMS of the scientist.
13. CS of the Bionic Woman.
14. CS of the scientist.
15. CS of the Bionic Woman.
16. CS of the scientist.
17. CS of the Bionic Woman.
18. MS of the scientist and the Bionic Woman.
19. MS of the scientist standing over the computer terminal looking at a print-out. (Fade-out to the next scene.)

The Bionic Kid is of course much shorter than a television film so the scenes are more condensed and truncated. A great deal of the added particulars found in the television version, however, are not due to an elaboration of narrative so much as to a preoccupation with dialogue. Much television editing is constructed around the need to facilitate dialogue. Scenes are usually formed by first establishing location and characters with a medium or long shot, then reversing back and forth between medium or close shots of each character as they speak to each other. Extensive observations have confirmed my suspicions that this formula holds across this and other shows. In this episode of The Bionic Woman there were uninterrupted sections of dialogue with as many as twenty such reversals (e.g. CMS of Jamie, CMS of Benny, CMS of Jamie, CMS of Benny, CMS of Jamie, . . . etc.). This talking-faces syndrome seems to effect the editing of media-influenced films even when they don't include any dialogue. In a short film like The Bionic Kid (5 minutes 32 seconds) several sections exhibit the type of back and forth cutting that is so prevalent on television.

The zoom in or out for establishment that David M uses to begin his film is found not only at the beginning of the television episode but immediately following each commercial break. The conventions of changing the film speed and using weird electronic sounds whenever the heroes are displaying their bionic powers is lifted directly from the television series, as well as the convention of zooming in on a distant object to demonstrate their super-powered vision. The formal manipulation David makes the most use of is the trick of filming the heroes jumping off walls and objects backwards, and then showing that piece of film in reverse to create the illusion of them jumping up higher than the normal person is capable of jumping.

The Bionic Kid is a good example of an experienced child film-maker who, having become involved in manipulating film form, is attending to available models as a guide for developing his own manipulative structures. It is in the Group VI films that the influence of these models is most visible.

The Mad Sniper has many characteristics of a television police show but the film-maker, apparently embarassed by the film's failure to duplicate the genre faithfully, decided to interject shots of two guys screening rushes of the film and arguing about how terrible it is. After obviously spending a lot of time constructing the sniper story and presenting the police chase of the sniper with many innovative and well planned shots, they cut back to the shots of the guys working on the film and one guy condemns it by saying, "This is nothing but a cheap shoot 'em up picture." The End.

The frame-within-a-frame aspect of this strategy is interesting but the way that the film is carefully constructed, and the fact that the "critics" are only shown near the end suggests that the strategy may have been the film-maker's response to his disillusionment with the original effort. It seems that older film-makers are influenced more by media models, and various social standards of acceptability. Older film-makers are clearly more self-conscious about their films than younger ones.

It is a farcical parody of the "mad scientist" genre. A mad scientist and his assistant, Igor, are attempting to build a composite "monster" with organs cut from unsuspecting victims. The scientist dies from eating a spoiled bologna sandwich. Though the content of the film is never serious, the film-makers are clearly quite serious about the way it is filmed. Every attempt is made to create realistic looking sets. The parallel cross-cutting between the mad scientist and the policemen who are after him is carefully constructed and matches well with the way that actions approaching a juncture are paralleled in nearly all television programs and Hollywood movies. There is a much greater use of dialogue, and consequently a more more frequent use of close shots and close ups than can be found in a majority of the other films. Many scenes have an editing structure like those found in The Bionic Woman. Common Hollywood-TV conventions seem to be fairly well mastered and are used in a very conventional manner. Continuous motion matching cuts are common.

Wrong Way to Make a Movie is a series of conventional "making a movie" scenes: "Take two . . . Lights! Camera! Action!" In each scene someone makes a mistake and they have to do the scene over again. It is not a narrative film at all in the sense that most of these films are. It does represent a concern for the manipulation of the formal aspects of film and, like The Mad Sniper, experiments with the frame-within-a-frame concept.

Group VI

The sixth group of films are the most successful in their control and manipulation of the medium for meaningful purposes. They are the most completely fictive products in that they seem to be consciously constructed for an audience. There are clearly no sections of these films where candid behavior has simply been recorded, nor are there any sections in which shots appear to have been put together in an unintentional or uncontrolled fashion. Conventional continuous-motion editing seems to be mastered and more creative editing is often displayed. Plot and sequence structure still rest heavily on television and movie models, but attempts to make more personal statements are common, and the films tend to go beyond duplications of a television genre. Special effects are used with a meaningful purpose within the overall structure of the film and do not become the central focus.

In Time, Paul V seems to be constructing a conflict between "real" time and the manipulated time of film. He uses a narrative about a boy who has to be home by a certain time but keeps getting delayed by freak mishaps to create a sense that a great deal of time has passed, even though the film is relatively short. Each shot is purposefully organized. The various vehicles the boy rides--a ferry, a train, a van--and the scenery outside, are shown in carefully constructed reversal cuts from inside to outside and back again.

I Can't Get Started, by George N, is a film about a lonely and destitute young woman who wanders around the city, sleeps outside, gets caught shoplifting, and sits and stares, simulating depression and loneliness. The sound track consists mainly of blues songs sung by women. There are back and forth close shots when the woman talks to the store detective. There is a liberal use of the zoom lens for establishing scenes. Continuous-motion cutting is used to follow the woman from place to place. Cuts are used to change location rather than following the woman as she moves. A long dolly shot is constructed by the camera on an escalator. The movement of a character is the central focus of the entire film but the movement is manipulated for the purpose of the film, rather than the film being structured by the movement.

Bluebird II, by Paul V, is a non-narrative film in which meaning is created solely by the juxtaposition of shots. The film is structured around a parallel montage between a woman and a man. The woman is alternately shown praying and grieving, and the man in various shots that suggest death and suicide. At the end of the film they are united in the same shot and embrace. A second shot shows the couple hugging in the background with a pair of doves on a hanging perch in the foregoound. The remainder of the film consists of footage showing the delivery of a baby. This kind of sequence structure is very conventional, but the construction of a visual statement that does not make use of conventional narrative forms is unusual. This is only attempted by the oldest members of this film sample and then, only after they have made several films.

Why? by George N also exhibits a well controlled construction of images.

Why?
(The sound consists of a pulsating noise resembling a heartbeat)

1. MS A little boy is talking to a black woman with sunglasses on.
2. "Why?" is superimposed on the screen while the camera zooms from a MS of a kid sitting to a CU of his face.
3. CS The woman and the little boy looking at the camera.
4. Title.
5. MLS of a street scene in which the kid is standing and eating a lollipop. Traffic is going by. The camera moves in close, the kid looks up at the camera, becomes very frightened and runs away.
6. MS to CU A fast zoom-in to the little boy who is sitting in the dark. There is a mysterious light reflecting in his eyes.
7. MS Cut back to the kid running along the sidewalk away from the camera. (The pulsating sound speeds up.)
8. MS of an empty park bench with an iron fence behind it. The kid runs into the frame and sits down on the bench. (pulsating very fast)
9. MS The angle changes with the camera moving in on the kid from the side. (The pulsating is normal and methodical.)
10. MS The kid looks over at the camera and friehtened by it again he jumps up to run.
11. Extreme CU of the lower portion of the kid's face, then the camera pans around his face.
12. MS to LS The kid jumps over the iron fence and runs away across the park in slow motion. He looks back over his shoulder in fright as he runs toward a grove of trees. The shot is taken through the iron rails of the fence. (The pulsating changes to a sort of knocking sound.)
13. MS of the kid running down a ramp away from the camera to a basement door. (There are bells and chimes.)

14. MLS begins in darkness, a door opens and the room inside is brightly lit.
15. MS of the kid talking on the telephone (bells, chimes, and knocking continue), he hangs up and leans back against the wall looking exhausted. He closes his eyes.
16. Cut to a CS of the kid's face. The camera moves in to a CU of the face, his eyes still closed. He opens his eyes.
17. Cut to a CS of the little boy with a candle in one hand and a sword in the other.
18. MS A low angle shot of the room. A guy with a beard walks into the frame and looks down to the side out of the frame.
19. MS The kid is lying on the couch asleep. The guy with the beard walks into the frame and the kid awakens and sits up. The guy sits down and the two of them converse.
20. CU of the kid's hands as he gives the guy with a beard a pill container.
21. MS of the guy holding the pill container and lecturing the kid. The kid attentively shakes his head up and down. The guy gets up and walks out of the frame and the kid lies back down to sleep rolling around restlessly on the couch.
22. The frame is dark. It fades into light and the little boy comes running out of the darkness toward the camera waving the sword. He runs past the camera and there is darkness again. (All sound stops.)

In this film we are clearly dealing with planned manipulation. In his attempt to depict the hallucinations and paranoia of a drug high this film-maker has utilized a tremendous amount of camera movement; he has used reversal cuts between shots of the kid's face as he looks into the camera and shots of the strange little boy that the kid sees; he has used close-ups to direct our attention to specific things--like the pill container--and he has used slow motion to give the scene an added dreamlike quality. A familiarity with the formal properties of the medium and a knowledge of cultural conventions combine to produce this kind of constructed artifact. It is not simply representative of a particular stage of cognitive development.

The only film not listed so far is Indians Who Have Tails by Orlando B. I was reluctant to place this film in any of the six categories. It is a non-narrative film, showing kids wearing Indian headdresses and tails, walking along the seashore. Nearly the entire film is composed of long shots and medium long shots, and the shots generally last longer than in most of the other films. Most of the shots pan or tilt with the "Indians" as they move along the rocks at the edge of the water. Live music, utilizing flutes or recorders, is superimposed over the entire film. The end result is a somewhat bizarre, dream-like film which exhibits very little formal manipulation, but seems to be very carefully controlled. Thus, it is action without narrative, like Group I films, yet at the same time a carefully controlled personal statement like the films in Group VI. It resists classification in the present scheme and will remain an isolated case for the purpose of this study.

So, we have basically six kinds of films:

1. films which "record" action;
2. films which "record" a narrative performance; and
3. films which play with a special effect.

None of the films in these first three groups display that consciousness of creating for an audience which is vital for a communicative articulation. The other three kinds of films are:

4. narratives created with an increased consciousness of cinematic manipulation, media models and a growing concern for the presentation to an audience of a "realistic" product;
5. parodied and caricatured media models which display the skillful manipulation of certain isolated formal events; and
6. films that are highly conscious of cinematic form and are attempting to manipulate it for the purposes of creating structures which will convey meaning.

These three groups exhibit a growing consciousness of creating an artefact for an audience.

The final section of this data analysis focusses more closely on the changes associated with an increase in film-making experience. I will discuss several children who have contributed more than one film to this sample in order to point out significant differences between their early and their later films.

Marguerite H is responsible for both The Story of Dracula and I Dream of Jeanie. The Story of Dracula was her first film and was done at the age of seven. I Dream of Jeanie was her fourth film, done at the age of nine. The Story of Dracula is exactly the kind of simple organization of motion-sequences that characterizes most first films. I Dream of Jeanie exhibits a conscious effort to manipulate form. The skills acquired by Marguerita between her first and fourth films, especially her increased ability to cut several shots together to achieve a composite effect, enable her to begin to copy available media models in her attempt to construct a more publicly palatable film.

Carmen R made her first film, The Murder, at the age of eleven, and made her fourth film, Marriage Movie, at the age of twelve. The Murder, like The Story of Dracula, is a typical Group II film. Marriage Movie is a very long and elaborated version of a Group II film. Rather than assimilate new editing strategies, Carmen has built up longer chains of the same kind of sequences. While this produces a more elaborated narrative, it does not represent any change in the way that film form is manipulated.

Sonia H made The Creeper, another typical Group II film, at the age of nine. She made her fifth film, Baron Blood, when she was twelve. There is surprisingly little difference between the structures of these films. Baron Blood is longer, and it is set in Central Park where the "monster" can really roam the woods properly in his search for unsuspecting victims. But the film-maker's energies seem to be concentrated on extending the film-making operation into more natural surroundings, and control and manipulation of the form is inhibited by the more unmanageable situation.

Carol S's first film, Friends, was done at the age of nine. Three Girls Who Get Killed is her third film, made at the age of eleven. Friends is the best example of a film structured by the activity it is "recording." Three Girls Who Get Killed is another typical Group II film.

At the age of ten, Richard R made his first film, Cow Robber. Again, it is typical of Group II. He was eleven when he made his fourth film, Monster in Central Park. Like Sonia H, he attempts to "improve" his staging and alters very little in terms of his narrative or his use of formal elements.

Rose R made Hungry Monster, her first film, at the age of thirteen. It is typical of the monster films in Group II. She made Teenage Werewolf Dies Again, another Centr

Park film, when she was fourteen. At the ages of thirteen and fourteen she is displaying the same progressions that Sonia H displays at the ages of nine and twelve, and that Richard R displays between ten and eleven, that is, movement from a typical monster narrative to a concern for natural sets.

Orlando B made his first film, Dracula Kills A Woman, at nine, and Indians Who Have Tails, his fifth film, at ten. This represents a move from the typical Group II stage to a more form conscious attempt to be creative, but the actual increase in formal manipulation is very limited.

David M was involved in the making of three films in this sample. The Detective, which he made with Jimmy L when he was twelve, is a Group IV-type media-modelled narrative. Twin Magic, a later film which was also made when he was twelve, is a special effects film. The Bionic Kid is a television-genre film that he made when he was thirteen. These three films exhibit a clear progression from the desire to show a naturalistic television-type story to an interest in exploring the possibilities for formal manipulation and, finally, to a reasonably successful combination of the two in his attempt to duplicate the bionic television genre. It is clear from studying these films that David M was learning new conventions and becoming increasingly familiar with the formal properties of the medium as he made more and more films. But it also seems clear that the kinds of new conventions he assimilated and the formal aspects he attended to were influenced greatly by his desire to imitate television models. The data from this sample indicates that the influence of television models is generally stronger among the older children than it is among the younger ones.

George N shows this influence in his first film, Stop Before Starting, which he made when he was fifteen. Like The Detective, this film attempts to replicate a television-type drama in a natural setting, using many television conventions. By the time he makes his fifth film, Why?, at sixteen, he has developed a facility in television-style editing and is able to use these editing conventions to present a non-television type narrative.

In a similar fashion, Paul V is incorporating many television conventions in his first film, Time. When he makes Bluebird II, three films later, he has become so comfortable with association cutting that he is able to condense the narrative in much the same way that is often done on television and in Hollywood films. Although Bluebird II is a much shorter film than Time, it deals with a much more complex range of material in a more complex fashion.

Conclusions

There are several conclusions which I (Michael Griffin) think can be drawn from these observations. First of all, older children seem to be more heavily influenced by television models and the younger children rely more on traditional fairy-tale type stories with simple protagonist-villain confrontations. Yet all of the children, regardless of age, tend to display a similar line of development in editing style and sequence structure with increased film-making experience.

Secondly, there is a preoccupation with showing moving action in all of the films at every age level, with the possible exception of Bluebird II. This is most likely the result of many influences. It is certainly related to the nature of the medium itself, film being the only medium capable of presenting moving images. It is also undoubtedly influenced by the tendency of many television programs to show the same kind of actions. Action-dramas, when not preoccupied with talking faces, usually show a lot of walking, running, chasing and fighting. The influence of children's playing behavior seems to be important. Since most of children's play involves a lot of movement, it inevitably has an impact on children who, at many times, are filming each other at play. Movement seems to be central to many aspects of children's culture.

Thirdly, even when older and more experienced film-makers go beyond attempts to imitate television genres and instead attempt to construct more "creative" statements, conventional television shot angles, shot compositions and editing persist. These films indicate that the influence of media models have at least as great an impact on conceptions of form and style as they do in regard to more conspicuous content, and that, in fact, the formal conventions that are assimilated from the media may become even more deeply entrenched than conventions of narrative or influences related to content.

Each of these young film-makers displays a change in their conception of film-making from their early to their later films. As their experience with the medium grows so does their manipulation of it. This process seems to take place through the gradual addition of new structures, new techniques or new settings to old and familiar methods of organization. Certain structures remain constant while new ones are assimilated. Then the new structures become cliche while attention is shifted to yet other considerations. At first, simple action sequences seem to be the core around which narratives are developed. Then action-sequenced narratives seem to provide a constant around which new settings are explored, new technical manipulations are experimented with, and new editing strategies are developed. The conventions of television narratives and television editing seem to be the constant formula around which experienced film-makers begin to explore less conventional or even innovative manipulations of form. Match-cut, continuous action editing becomes the norm, the "code," which when broken in a consistent fashion gives rise to new conventions and a new code. This is a media-specific process in which we all learn to use a particular symbol system in a particular, socially approved manner. The only real advantage that adults have over children in this endeavor is the greater length of time they have spent being exposed to a cultural pattern of media use. It is doubtful whether an adult without film-making experience could construct a film as complex as many of the children's films in this sample.

CHAPTER X

CODING THE FILM TECHNIQUES USED AT THE WORKSHOP

Michael Griffin's approach to his study was that of a trained film maker and film analyst operating intuitively and grouping films according to categories that would make sense to him and other film makers. Our own approach by contrast had to be somewhat more laborious in search of the kind of objectivity that would permit replication of our analysis and verification of our findings. We list here the films which were the focus of the present study along with accompanying data on the film maker's name, age, age group, sex, whether he or she many any films (called a film maker: FLM) or made only one film (One), whether this was the first film made or a film made later (1st vs. Late) and of which ethnic group the child was a member (Puerto Rican, White, Black or Chinese). With one or two exceptions (by accident) this is the same group of films studied by Michael Griffin. This information is presented in Table 19 pages 287-288.

It seemed to us at the inception of this project that one of the most straightforward of the possible ways of studying children's film making was to analyze them by means of a set of traditionally applied technical categories from film literature. This was a particularly appealing approach because it would enable us to study the attainment of specific technical skills. These in turn ought to illuminate both the order of normal perceptual and cognitive developments and also the impact of teaching and of experience in the film making process on the speed with which skills are attained. In this chapter we report on what happened when we attempted to carry out this apparently simple task.

This work began propitiously enough when, in the early Fall of 1974, a new M.A.

Table 19

Workshop Films

Film #	Film Maker	Title	Age	Age Group	Sex[a]	Ethnic Bkgrnd[b]	Films Made[c]	Previous Experience[d]
1	Margarita H	Story of Dracula	9	7-10	F	PR	FLM	1st
2	Carol S	Friends	9	7-10	F	PR	FLM	1st
3	Sonia H	The Creeper	10	7-10	F	PR	FLM	1st
4	Margarita H	I Dream of Jeanie	10	7-10	F	PR	FLM	LATE
5	Maria C	Lost Girl	8	7-10	F	PR	ONE	1st
6	Jessica R	Pretty Pond	9	7-10	F	WH	ONE	1st
7	Rose G	The Doll	10	7-10	F	WH	ONE	1st
8	Carmen R	The Murder	11	11-13	F	PR	FLM	1st
9	Rosa R	Hungry Monster	13	11-13	F	PR	FLM	1st
10	Carol S	Three Girls Who Get Killed	11	11-13	F	PR	FLM	LATE
11	Sonia H	Baron Blood	12	11-13	F	PR	FLM	LATE
12	Carmen R	Marriage Movie	12	11-13	F	PR	FLM	LATE
13	Carol S	Roach Killer Shoes	13	11-13	F	PR	FLM	LATE
14	Elaine C	Desperate Girl	12	11-13	F	CH	ONE	1st
15	Elizabeth B	The Cookie Show	13	11-13	F	PR	ONE	1st
16	Mary L	Mary's First Friend	13	11-13	F	PR	ONE	1st
17	Mary C	The Picnic	13	11-13	F	PR	ONE	1st
18	Rosa R	Teenage Werewolf Dies Again	14	14+	F	PR	FLM	LATE
19	Edwin R	House of the Vampire	7	7-10	M	PR	FLM	1st
20	Orlando B	Dracula Kills a Woman	9	7-10	M	PR	FLM	1st
21	Richard R	Cow Robber	10	7-10	M	PR	FLM	1st
22	Edwin R	End of the World	8	7-10	M	PR	FLM	LATE
23	Orlando B	Indians Who Have Tails	10	7-10	M	PR	FLM	LATE
24	Harry N	Vampire Who Hide in a Tree	8	7-10	M	PR	ONE	1st
25	Angel M	Boxing	10	7-10	M	PR	ONE	1st
26	John D	Channel 6 News	11	11-13	M	WH	FLM	1st
27	David M, Jimmy L	The Detective	13	11-13	M	PR	FLM	1st
28	Carlos V, Eddie W	Wrong Way to Make a Movie	13	11-13	M	PR	FLM	1st
29	Richard R	Monster in Central Park	11	11-13	M	PR	FLM	LATE
30		The Magic Stick	11	11-13	M	WH	FLM	LATE
31	David M	Twin Magic	12	11-13	M	BL	FLM	LATE
32	Carlos V, Eddie W	It	13	11-13	M	CH	FLM	LATE

Table 19 (cont'd)

Film #	Film Maker	Title	Age	Age Group	Sex[a]	Ethnic Bkgrnd[b]	Films Made[c]	Previous Experience[d]
33	David M	The Bionic Kid	13	11-13	M	BL	FLM	LATE
34	John N	The Addict	12	11-13	M	PR	ONE	1st
35	Carl J	Bagfull of Sorrows	13	11-13	M	BL	ONE	1st
36	David L	A Night of TV Watching	14	14+	M	CH	FLM	1st
37	George N	Stop Before Starting	14	14+	M	PR	FLM	1st
38	Paul V	Time	15	14+	M	BL	FLM	1st
39	Jose B	Kung Fu	14	14+	M	PR	FLM	LATE
40	George N	Why?	15	14+	M	PR	FLM	LATE
41		The Bombs II	16	14+	M	BL	FLM	LATE
42	Eliot F	The Playful Phantom	15	14+	M	PR	ONE	1st
43	Jose M	A Friend in Need	15	14+	M	PR	ONE	1st

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[a] F = Female
M = Male

[b] BL = Black
CH = Chinese
PR = Puerto Rican
WH = White

[c] ONE = This film maker made only one or two live, narrative films by the end of the project
FLM = This film maker made at least four live, narrative films by the end of the project

[d] 1st = First film made by this film maker
LATE = Later film made by this film maker (with one exception, each is at least the fourth live, narrative film completed)

student in the Developmental Psychology Program at Teachers College came forward with the information that she had a good deal of experience in professional film production, was very interested in the area of children's aesthetic development and would be available through the extended period needed to complete the project (while studying for her Ph.D.). She quickly proved to be highly industrious, conscientious, well-organized and able to get along well with most of the others involved. In short, she seemed the perfect person to assume responsibility for this work. In addition, Rodger Larsen, Lynne Hofer, and the film teachers expressed a keen interest in assisting in the process of identifying and defining the significant technical terms to be used in the analysis--thus providing a panel of experts to enhance and legitimize our own efforts. In the series of meetings attended by the authors, the M.A. student, Lynne, Rodger and one or more of the teachers during the Fall and Winter of 1974-1975 the process of identifying and clarifying the concepts proceeded apace.

As already described, this process led to one of the break-throughs in the effort to establish a working and workable relationship with the teachers. The recognition that they, the experts, could not agree on the exact meanings of terms which they used daily and which constituted part of the exoterica of their craft, came as an enlightening shock for them as well as an ominous foreshadowing for us. Had we been wise or humble enough to recognize its implications we would not have to be writing much of the current chapter.

By December, the M.A student had produced a six-page proposal concerning possible procedures and contents for the study. After much refining of this proposal in consultation with the Young Filmakers a new, expanded version was produced and accepted as a workable procedure. The student-in-charge (SIC) quickly gathered a sample of five live and animated films from among those being produced at the Ludlow Street Workshop. She coded these according to the proposed procedures and by July had an impressive preliminary report on the five films.

As the preliminary report seemed entirely adequate after a brief review, the SIC was encouraged to proceed. Beginning in September, 1975, she selected a larger sample of films, organized and conducted training sessions for volunteer coders recruited from Developmental Psychology graduate courses, assigned particular films to particular coders, gathered the resulting data and by the end of November had constructed an extensive set of tables listing the absolute and percentage frequencies of the occurrence of the various phenomena in twenty-five films. This represented the first finished product of the project and seemed a refreshing counter-point to many of the frustrations encountered in other aspects of the project to that point. Under close scrutiny, however, it quickly became apparent that the data presented in the tables were inadequate to answer the questions we wished to ask. The procedures used to produce it, in fact, had largely ignored the basic canons of social science research.

We probably should digress at this point to briefly discuss what is meant by the phrase "canons of social science research." An understanding of these ideas is crucial not only to an understanding of this particular narrative, but also to an understanding of why we proceeded with many aspects of the project as we did. It also underlies many of the conflicts of the scientist versus artist type which permeated the project. At a broader level, it is important to the evaluation of information or "truth" at any level. What we say here makes the assumption that there are some constancies in the affairs of men and children and that to some extent these can be reckoned with.

Perhaps the most basic question is that of objectivity: How can one know that a given phenomenon does in fact exist in the way that one perceives it? The anweer that social scientists generally accept is based on the idea of consensual validation or of replicability. That is, if you, I and someone else all experience the same thing under the same conditions then the chances are very good that what we experienced does indeed exist under those conditions and is not a result of some idiosyncratic process within oneself. This is referred to as the question of reliability. A related question concerns how one knows that an observed relationship can be generalized to other situations. If, for example, a boy behaves in one way and a girl behaves in another in a particular situation, does that justify our believing that boys and girls generally would behave differently in that situation? Social scientists have developed a number of theories and techniques concerning the number of observations and the kinds of samples which must be observed in order to be able to conclude with some confidence that a particular relationship does in fact exist, in general.

A third question concerns the conditions under which one experience or piece of information can be considered to be the same as or to represent some other experience or information, etc. Psychologists refer to this as the question of validity, and attempt to answer it in a number of ways which generally involve a statistical comparison between their derived data and other, more direct measures of that which their data is intended to represent. The direct measure is referred to as a criterion. In our case, an ideal criterion would be an agreement by our experts that in a given film there are ten jump cuts, for example. The validity of our jump cut coding data could then be checked by comparing the number of jump cuts coded by our coders with the criterion.

The set of rules and procedures developed to deal with the problems of objectivity or reliability, of generalization or sampling, and of validity are, then, what we refer to as the canons of social science research.

To return now to the SIC and her data, it was clear that no attempt had been made to answer the above questions during the coding of the data. There was no evidence, for example, that a given film would be coded in the same way by a different coder--or even by the same coder on a different day. In fact, it appeared that different coders were coding quite differently. This mini-disaster did not, of course, occur over just a few days. Our SIC was experienced in business and film but had little background in research. She had not yet learned the basic methodological ideas and procedures just discussed. Being quick to pick up terminology and the surface manifestations of research methodology, however, she was able to present a facade of competence. In addition, she had a strong interest in the therapeutic aspects of psychology and, during her period as SIC, she took her first course in small group processes. This was such a profound experience for her that the notions of open group communication, a democratic leadership style and an emphasis on interactional process provided a powerful influence in her work with the volunteer coders--which, of course, constituted a small group of sorts. That these notions provided the wrong paradigm for the task at hand occurred to some of her helpers but was not confronted until much time and unproductive effort had been expended. Her coders learned something about the context of their work but too little about its content.

Another problem was that the developed version of the technical codes had not been finally and adequately clarified with our film experts and, therefore, was of questionable validity. Although much discussion had taken place, a real consensus on the "final" version had not been achieved. This was partly due to the inability of our film experts to verbalize their objections in coherent, precise and forceful enough manner to overcome the inertia developed by a student anxious to make a positive step forward, and it was partly due to our impatience with her because of the slow progress of the project as a whole.

Any analysis of this breakdown in our research on film technique would clearly show that there were personal factors on the part of the SIC that made it occur, as well as personal factors on our own part. For our own part, we rather blithely assumed that the coding of this kind of phenomena would not be that much more difficult than the codings we had used in many other kinds of research projects. In consequence, caught up as we were in the usual turmoils of running a research project at the same time as running a full-time psychology program of 120 graduate students with four staff members (more or less a norm at that time at Teachers College, Columbia University), we devoted less vigilance to this aspect of the project than to some of the others mentioned in the earlier chapters. There were, in addition, other personal factors involving a state of some turmoil in the college as a whole as a result of a new administration that led to our lack of sufficient supervision of this sub-project. More importantly, however, the loss of a year on this matter showed us clearly that this was a much more difficult coding task than we had thought. When our first SIC moved on to another university, we were free to make a new kind of arrangement for codification. This time the new SIC was given a professional film maker as her hired consultant. Her first assignment was to solve the problem of validity by meeting regularly with the professional film maker. They were to go over a small set of our films on a shot-by-shot, category-by-category basis and define the categories in a way which would allow valid and precise coding.

We ourselves selected a sample of films adequate for our purposes (the sample will be discussed in some detail later), and several of the coders agreed to continue on in the new semester with the task of recoding some of the old films and coding the additions. The importance of precise, careful coding and of understanding by all concerned of category definitions was stressed. All apparently proceeded according to expectations and by the Summer of 1976 a majority of the 43 films in the sample had been coded by our new group of five coders.

At this time, our latest SIC, like the first one, moved up into a Ph.D. program and resigned from the coding task. A new SIC, this time a male who had been a member of the preceding group, was appointed to complete the task of coding all the films in the sample. A group of coders was again recruited from courses and the latest SIC took up the tasks of training them, supervising the coding of the remaining films and compiling the total set of data. He also had a number of the films recoded both because we needed a sample of twice-coded films to check reliability and because he felt that some of the earlier coding was inadequate. By the Spring of 1977, almost all the films had been coded, a set of tables had been prepared, a brief evaluation of the reliability of the coding of three films had been done and the SIC was able to summarize some of the obvious differences between the films of children of differing age, sex, etc

Review of the data by the authors and the SIC, however, revealed a number of apparent inconsistencies. As a result, the SIC spent many hours over the Spring and Summer of 1977 personally reviewing most of the films and correcting inconsistencies, reconciling differences between coders and preparing yet another set of tables. At last we seemed to be ready to proceed with the drawing of conclusions from the data.

Unfortunately, however, we still have not reached the end of our narrative. In the Fall of 1977 when we began preparing the data for computer analysis we noticed that a number of pieces of data appeared to conflict in significant ways with what we knew of the films. A review of the films in question confirmed this impression and led to the recoding of these categories in those films. In doing this, however, we noticed that the coding of many other categories also appeared to be inaccurate. As a result, the entire corpus was gone through for yet another recoding. Most of the conclusions presented later are based on that final 1977-1978 recoding. This coding consumed the major part of five months of our time though it was built in many ways upon three years of work by our predecessors. As we will show it is still not totally satisfactory. In the next two sections we will discuss the details of how and why this is the case.

The Sample

Our initial objective was to investigate differences in the films of boys versus girls, of younger versus older children and of first-film-makers versus those with more experience. By the Spring of 1976, when the final sample was selected we began to be aware that there were significant differences between children who dropped out of the program relatively early and those who continued on, so this dimension was also considered. A possible objective was, then, to select a set of films equally divided between the sexes, between age groups, between early and late films, and between those of children who stayed and those who didn't. Actually, of course, because drop-outs didn't make "later" films it wasn't possible to meet this criteria. Another possible approach would have been to select randomly from all available films in order to get a sample that was representative not only of the various types of films but also of the distribution of each type in the total sample. This strategy would have resulted in many more films by boys and more films by drop-outs being included in the sample. It might also have meant that no films by girls over ten years who were consistent film makers would have been included due to the small number of such films.

The most commonly used strategy to deal with this kind of problem involves selecting randomly from the available films of each type (that is, from early films made by young boys who were film makers, from early films made by young girls who made only one or two films, etc.). Three other considerations weighed on our selection, however. First, we wanted to be able to compare early and late films of the same children. Due to the small number of available films it seemed best to do this rather than hope that early and late films selected randomly would actually come from children who were comparable in all ways that were not controlled in our design (IQ, ethnic group, prior film experience, personality). Second, we wished to be able to relate data gathered from the films to other information that we had about some, but not all film makers. As a result we wanted the sample to contain as many films as possible by children about whom we had extensive information. And, third, many of the available films from the earlier Young Filmaker projects could not be adequately identified even on the four variables we have discussed.

In order to balance the many, often competing requirements, a set of criteria were worked out for doing the selecting. They went as follows: A minimum of three and a maximum of five films of each type would be included when available. Films made during the period of our study (1974-1976) would be searched for appropriate films of each type and those from the earlier period (1969-1974) used only when enough of such films were not available. When more films of a given type were available than necessary films would be selected first for diversity of ethnic group, second for the amount of information available on the film maker, and third for the diversity of ages within the group.

Films selected as those of "one-shot film makers" (as distinguished from "drop-outs" who may or may not have completed a film) were films made by those who had filmed either one or two live, narrative films by the end of the project. "Film makers," on the other hand, were defined as those who had completed at least four live, narrative films. In every case, we attempted to acquire the first completed film of the child though in the cases of two female film makers we were unable to do so and used their second films instead. Films selected as "later" films were at least the fourth live, narrative film by a film maker whose first film was included in the sample. One exception to this rule was made. A fourth film which was in production at the time of the sample selection was never completed and was lost. Rather than replace this boy who was the only Chinese film maker in the sample, his first film was retained and a late film by a Puerto Rican boy of the same age was included.

Table 20 contains the distribution of films in the sample by age, sex, period of attendance, film maker status, and early versus late film. Table 21 contains the same data broken up by age, sex and ethnic group. In this table, "½" of a film is credited to both Puerto Rican and Black groups because one film was co-produced by a Black and a Puerto Rican boy. All films produced by non-Puerto Ricans were filmed during the 1974-1976 period. Tables 20 and 21 are presented on page 297.

As Table indicates, several types of films are represented by less than three examples. This is true for several reasons. Among the girls' films, if less than three films are included then less than three films of that type were produced. Only

Table 20

Distribution of Film Sample by Age, Sex, Period of Attendance and Film Maker Status

Age Group	Film Maker Status		Males 1969-74	Males 1974-76	Females 1969-74	Females 1974-76	Totals	
7-10	One-Shot		2		1	2	5	14
	Film	Early	3		3		6	
	Maker	Late	2		1		3	
11-13	One-Shot			2	2	2	6	20
	Film	Early		3	2		5	
	Maker	Late	1	4	4		9	
14+	One-Shot			2			2	9
	Film	Early		3			3	
	Maker	Late	1	2	1		4	
Total	One-Shot		2	4	3	4	13	43
	Film	Early	3	6	5	0	14	
	Maker	Late	4	6	6	0	16	
	TOTALS		9	16	14	4		
			25		18		43	

Table 21

Distribution of Film Sample by Age, Ethnic Group and Sex

Age Group	Puerto Rican Male	Puerto Rican Female	Black Male	Black Female	Chinese Male	Chinese Female	White Male	White Female	Total Male	Total Female
7-10	7	5						2	7	7
11-13	3½	9	3½		1	1	2		10	10
14+	5	1	2		1				8	1
Totals	15½	15	5½	0	2	1	2	2	25	18
	30½		5½		3		4		43	

one film was completed by a girl older than thirteen years, and she had been thirteen when she made her first films. This lack of one-shot films and of early films from film-making girls skews the sample and has led to a number of problems in the analysis which will be referred to later. Only two eleven to thirteen year old girls met the criteria for "film makers." As a result, four films from eleven to thirteen year old one-shot girls were included. In addition, a third film from one of the young film-making girls was included. Her first film was completed when she was nine but she was eleven when she produced her fifth and thirteen when she finished the last film, her seventh. Another young girl and one of the boys had also passed their eleventh birthdays before completing their "late" film, leaving only three late films by the youngest age group. This problem did not occur with the eleven to thirteen year old group thanks to the generally shorter interval between first and late films (an average of nine versus ninteen months) for the older children.

The fact that there are only two films by one-shot boys at each age level is a result of having divided the sample into three age groups rather than the two which were originally formed. The sample was first divided between twelve and thirteen years for the boys and between eleven and twelve years for the girls. This seemed justified by the fact that the onset of puberty is approximately a year later for boys than girls and had the advantage of providing almost equal numbers of films by "older" and "younger" boys and girls. An examination of the data, however, quickly revealed that such a grouping put the girls at a serious disadvantage vis a vis the boys and obscured some interesting age differences. Thus the sample was redivided, leaving two one-shot male films in each of three age groups rather than three films each in two groups.

We can best summarize the effects of selecting the sample on the basis of the criteria listed above, then, by simply saying that one, films from the period of our workshop study are over-represented almost to the exclusion of films from the earlier period in those categories (males over ten years and female one-shot film makers) where films from the late period were available and that, two, film types which are in the minority in the set as a whole are over-represented in our sample. The 43 films in the sample represent 21 percent of the 202 live, completed films of which we have some record. In comparison, twenty (or 49 percent) of the 41 films completed during our study are included in the sample, while only 14 percent of the earlier ones from Rivington Young Filmakers are so included. Though this over-representation was partially necessitated by the paucity of information on and difficulty of access to the early films, it also has the advantages of providing a sample about which we have extensive information concerning the film makers and the processes of film making, and of providing an opportunity for comparing equal numbers of films from the two workshop periods. Because these two periods differed in a number of ways, such a comparison provides a chance to test the generality of findings concerning sex differences, age differences, etc.

Other groups of films over-represented in the sample include those made by Black, White and Chinese children. Together they represent 30 percent of the sample while they make up only 12 percent of the entire corpus. Again, they are over-represented in order to be better able to extend the generality of findings from the sample. Similarly, girls' films are over-represented, making up 42 percent of the sample as opposed to 26 percent of the entire group. This discrepancy is primarily due to the over-representation of films by film-making girls (26 percent as opposed to 12 percent). And, finally, films by the oldest age group comprise 21 percent of the sample, but only 14 percent of the 202 film set.

Although the possibility that the method of selecting the sample may be responsible for biasing the results in some unknown ways cannot be ruled out, the fact that the sample is so large in relation to the total group and the fact that so many dimensions which may bias the results are known and can, therefore, be controlled for statistically provide some assurance that results from this sample can be generalized to the larger group and to films by children with similar characteristics made elsewhere. Having made this very qualified statement, we turn now to the variables which have been coded.

Film Technique Code Definitions

The following definitions are those used in the final coding of the films done by F. Eadie. Many of these definitions were changed significantly over the extended period during which the films were coded and recoded. A few even changed during the final coding. Most changes were toward greater specificity and concreteness though some involved changes in the conceptualization of the terms. In developing these definitions we attempted to make them as objective and precise as possible while retaining the meaning assigned to the term in film literature. It should be noted that not all authorities agree on the exact meaning of many of these terms.

Setting

1. Interior shot. A shot whose image is almost exclusively composed of space which is enclosed by a building or vehicle. In addition, a shot made by a camera which is, or appears to be, inside of a building or vehicle, but whose image includes substantial material outside the building or vehicle (shown through a door or window), but which also includes one or more actors or significant objects which are inside the same building or vehicle, is also coded as an interior shot. Animated shots are also coded as interior shots.

2. Exterior shot. Any non-interior shot.

3. Location. The physical setting in which a shot is made. A new location is defined when no part of the new setting has been visible in any preceding shot nor in any subsequent shot made from a previously defined location.

Camera Angle

4. Extreme high angle shot. A shot in which the camera points downward at an

angle of at least 80° to the horizontal during at least part of the shot.

5. High angle shot. A shot in which the camera is pointed at an angle between 80° and 45° below the horizontal while the camera is stationary at least momentarily. Thus, a shot is coded as containing a high shot if during that shot the camera tilts down from the horizontal to an angle less than 45° and then tilts up again.

6. Medium high angle shot. A shot in which the camera is pointed at an angle between 45° and the lower range for a horizontal shot as defined below while the camera is held stationary, at least momentarily.

7. Horizontal shot. A shot in which the camera is at least momentarily stationary while the horizon within the image (to the best of the coder's ability to determine its location) is within plus or minus ten percent of frame height of exactly bisecting the frame.

8. Medium low angle shot. A shot in which the camera is pointed upward at an angle between the upper range of a horizontal shot and +45° while the camera is held stationary, at least momentarily.

9. Low angle shot. A shot in which the camera is pointed at an angle between 45° and 80° above the horizontal while the camera is stationary at least momentarily.

10. Extreme low angle shot. A shot in which the camera points upward at an angle of at least 80° during at least part of the shot.

Camera Distance

11. Extreme long shot. A shot of a landscape, skyline, building or large object off in the distance or of characters whose standing height is less than 25 percent of the frame height.

12. Long shot. A shot of one or more characters whose standing height is greater than 25 percent and less than or equal to 60 percent of the frame height or of a full building or of a partial building or an object at a distance.

13. Medium long shot. A shot of one or more entire characters whose height is

greater than 60 percent of, but no more than, that of the frame, or a shot of most of a building at a moderate distance or of an object, title or credit which does not completely fill the frame.

14. Medium shot. A shot of a character whose height is greater than that of the frame but whose waist to top-of-head distance is less than or equal to the frame height. Alternately, a major part of a building or an entire object, title or credit.

15. Medium close up shot. A shot of a character in which the frame height is less than the waist to top-of-head distance but greater than or equal to the shoulder to top-of-head distance. A small portion of a building or part of an object, title or credit which is larger than the frame.

16. Close up shot. A tight shot of a character's head, hand and arm, or similarly sized portion of the body; detail of an object or building; small part of a title or credit.

17. Extreme close up. A shot of a small detail of a person such as a hand, watch, eyes or mouth. A tight shot of a very small object or a fine detail of a larger object.

Note--. In shots involving camera movements (zooms, tracks) or motion of characters toward or away from the camera, the initial and final distances are coded as are distances at which the motion stops.

Sound

18. Mixed sound. Shots in which more than one of the types of sound listed below were recorded over each other (i.e., music and voice can be heard simultaneously).

19. Synchronous sound effects. Sound effects heard simultaneously with the visual images of the events which cause the sounds.

20. Sound effects over. Sound effects for which the physical cause is not visible. These often involve background sounds.

21. Dubbed voice. Characters can be seen and heard talking simultaneously.

22. Voice over. The voice of a non-visible character is heard speaking.

23. Music. Music has been recorded on the sound track.

Editing

24. Establishing shot. A wide angle or panning shot of the environment which provides information concerning the context in which what follows will occur. No plot-relevant action occurs.

25. Master shot. A wide angle or panning view of a location in which the following scene takes place. May include actors and preliminary action (walking up, opening the door). Alternatively, a shot of the environment which provides specific, plot-relevant information, but no action.

26. Transition. A shot which clearly initiates or terminates a scene and/or links one scene with the preceding or succeeding one. It may involve a title, narration, change in music, verbal markers ("Good-bye," "See you tomorrow"), or actions such as going in or out a door, waving good-bye, walking away.

27. Cut. The beginning of any shot which is not a match cut.

28. Match cut. The juxtaposition of two shots in which action is continuous and uninterrupted with continuity of time, setting, characters, props and lighting.

29. Parallel construction. The intercutting of two sets of action which are intended to be interpreted as occurring simultaneously. They may occur in the same location (as defined above) but may not include the same characters. A shot in which characters are seen converging or diverging is not coded as parallel construction.

30. Point-of-view shot. A shot in which the carera acts as the eyes of a person. Hand-held tracking shots are treated as point-of-view shots even when the camera is not obviously acting for one of the overt characters.

31. Reverse angle cut. A cut in which the camera reverses perspective (greater than 90° change of angle in the horizontal plane) from the preceding shot when both shots are in the same setting and/or scene.

32. Cut away. A cut from the focus of action to a detail and/or action which is tangential to the main action but is within the same scene.

33. Insert. A detail shot (usually a close up) that is spliced into a scene to provide specific information relevant to the ongoing action.

34. Jump cut. A cut which is almost, but not quite, a match cut. Generally one dimension (camera angle or distance, position of one or more actors or props) changes noticeably but not enough to indicate a clear break in the action. Used as a technique to create the appearance or disappearance of objects or people or to indicate the action of a magical, invisible force. Also used for humorous effects.

35. Jump cut error. An unintentional,disturbing jump cut.

36. Black. Unexposed film with no image. Generally used as a transition marker.

37. Black error. Unexposed film at the beginning or end of a shot which has not been removed in editing.

38. Flash frame. An overexposed frame(s) which appears as a bright flash at the beginning or end of a shot and which has not been removed in editing.

39. Registration shift. Poor alignment of the film frames in the projector which causes the entire image to appear to jump or shift on the screen. It generally occurs at the beginning of a shot and is due to poor splicing, to a stretched splice or to damaged film. Registration shifts were not included in the final analysis as they were not always due to the child's error.

Camera Movements and Errors

40. Zoom. A change in depth (and apparent camera distance) within a single shot created by a progressive change in the distance between camera lenses.

41. Connecting and framing pans. A pivoting of the camera in the horizontal plane so as to connect visual elements of a scene or so as to better frame one or more elements.

42. Following pan. A pivoting of the camera in the horizontal plane to follow

a moving character or object.

43. Tilt. A camera pivot in the vertical plane longitudinal to the camera (i.e., up or down).

44. Tracking. The camera is physically moved in the horizontal plane within a shot.

45. Reverse angle shot. A shot in which the camera changes its perspective in the horizontal plane by more than 90° as the result of one or more pans or of tracking.

46. Focus error. The primary visual elements are clearly out of focus. Not counted as an error when it is used as an effect (i.e., to indicate a transition).

47. Framing error. An important part (top of head, an arm, etc.) of a primary character or of an important object is outside the frame due to poor selection of camera distance or poor centering of the frame.

48. Exposure error. The image is washed out due to over-exposure or is too dark due to under-exposure. Over-exposures outdoors are not scored as errors unless the camera is unintentionally pointed close to the sun (the camera used employed an automatic exposure mechansim which was not controllable by the child).

49. Unsteady camera. Movements of the camera which have no clear intent in the context of the film or of the particular shot.

Miscellaneous

50. Artificial lighting. Special lights were used to provide adequate light for exposing the film.

51. Natural lighting. Only the light naturally available in the setting was used for filming.

52. Special effects. One of a large number of "tricks" with the camera or in editing is used to distort the normal flow of time or to simulate a physcially impossible event. These include sudden appearances and disappearances, fades, pixilation, reversed motion, slow motion, very rapid camera motion to simulate disorientation, etc.

53. Pixilation. Animation using full-sized objects and/or people.

54. Animation. The creation of apparent filmic motion through the process of exposing a few frames of film at a time and moving the art work or objects being filmed in incremental steps between exposures.

55. Titles. A printed (or written) text is filmed and inserted into the film to provide information concerning the title, setting or characters in the film.

56. Credits. Printed text providing information concerning the individuals who created the film; includes actors, director, cameraman, etc. Shots which contain both title- and credit-type information are coded as titles.

57. Number of shots. The total number of shots in a given film. A shot is defined as a segment of film which was exposed in a continuously running camera. Shots separated by a jump cut are counted as two shots unless it appears that the cut was created by damage to the film after the film maker had completed it.

58. Film length (time). The length of the film, including titles and black film with an intentionally recorded sound track. Coded in seconds.

Constructed Variables

The following variables were constructed from the preceding coded ones. The formulas used in their calculation are included.

Angles per shot. Because many shots included more than one of the camera angles defined above (4-10) we calculated the mean number of angles per shot for each film as follows: (total number of angles) / (total number of shots).

Mean angle. In order to determine the average angle used in each film, each of the angles defined above was assigned a value ranging from one (extreme low angle) to seven (extreme high angle). The mean angle was then calculated as follows: (sum of angle values) / (total number of angles).

Angle standard deviation. In order to have a measure of the variability of the angles used in a given film this variable was constructed as follows:

$$\frac{\Sigma(\text{number of shots with each type of angle X (value assigned to that type of angle)}^2)}{(\text{total number of angles}) - (\text{mean angle})^2}\,^{\frac{1}{2}}$$

Distances per shot. The average number of distances as defined above (#11-17) used per shot was calculated as follows: (total number of distances) / (number of shots).

Mean distance. The average distance used in each film is determined by assigning a value from one (extreme close up) to seven (extreme long shot) to each of the distances used in the film, adding all these values and dividing by the total number of distances used.

Distance standard deviation. In order to have a measure of the variability of the distances used in each film this variable was calculated as follows:

$$\frac{\Sigma(\text{number of shots with each distance X (value assigned to that distance)}^2)}{(\text{total number of distances}) - (\text{mean distance})^2}\,^{\frac{1}{2}}$$

Non-live shots. This is simply the sum of the number of titles and credits (unless they included actors or were superimposed over or part of a scene), animation shots, and black used in each film.

Shot length. The average length (in seconds) of all shots used in each film. It is calculated by dividing the film length by the number of shots.

Total errors. The total number of jump cut errors, black errors, flash frames, focusing errors, framing errors, exposure errors and unsteady camera errors made in a particular film.

Variable Transformation

In order to weigh the data from each film equally in the various statistical procedures, most of the variables were converted to percentages by dividing the number of shots in which a given variable occurred by the number of shots in that film and multiplying by 100. Variables with which a different procedure was followed are listed below and the appropriate transformation is described.

Location (#3) and Total errors: Divided by film length and multiplied by 100.

Establishing shot (#24), Master shot (#25), Match cut (#28), Following pan (#42), Tracking (#44), Reverse angle shot (#45): Divided by (total shots - non-live shots) and multiplied by 100. These techniques are applicable only to live shots.

Transitions (#26): Divided by (total shots - credits - animation shots - 1) and multiplied by 100. Titles and black were used for transitions, credits and animation were not.

Parallel construction (#29) through Jump cut error (#35): Divided by (total shots - non-live shots - 1) and multiplied by 100. These variables all refer to the cut or relationship between two live shots; the first live shot in a film could not, therefore, receive one of these codes.

Titles (#55) through Film length (#58): Not transformed.

Methods of Computing Reliability Data for Film Technique Codes

Two types of statistics were computed using two different types of data in order to gain the best possible estimate of the consistency with which the variables were coded. The first method involved computing percentage agreements on a shot-by-shot basis between pairs of individual protocols. The results of these comparisons are reported in columns one through four in Table 22 on pages 309 to 311. Two methods of computing percentages were employed because both are theoretically justifiable and because they produce very different estimates under some conditions (especially where a particular technique is used very frequently). The first method (columns one and three) uses the total number of shots as the base, or deonominator, of the percentage. This method treats non-checks on both protocols as agreements that the technique was not used in a given shot. The second method uses the total number of checks as the basis of the percentage. Columns two and four contain percentages calculated in this, more exacting way. This is the method of calculating reliability most often used in observational research and does not give artificially high results due to the rare occurrences of particular techniques or to mutual sloppiness on the part of coders.

The calculation of the percentages discussed above was complicated by the fact that the coders did not always perceive the same set of shots in a given film. In

Table 22

Summary of Film Technique Reliability Data

Film Technique	Percent Agreement				Correlations		
	1	2	3	4	5	6	7
	E_1/E_2 (3 Films)		E_2/O (5 Films)				
	Percent of Total Shots/ Cells	Percent of Total Checks	Percent of Total Shots/ Cells	Percent of Total Checks	Eadie/ Baracca (42)	Coder$_1$/ Coder$_2$ Same Film (15)	Coder$_1$/ Coder$_2$ Diff Film (33)
1. Locations	90.6	92.8	72.7	73.7	.867	.082	.223
						(10)	.203
2. Interior Shots	100.0	98.6	96.1	71.9	.997	.973	.028
							-.110
3. Extreme High shots					.603	.681	-.178
4. High Angle Shots	89--	78--	72--	27--	.483	.451	.402
5. Medium High Shots	96	90	91	78	.557	.550	.180
6. Horizontal Shots					.807	.647	.615
7. Medium Low Shots	92.1	83.4	81.4	58.3	.763	.041	.063
8. Low Angle Shots					.768	.345	.042
9. Extreme Low Shots					.481	----	-.045
10. Angles/Shot							
11. Mean Angle					.637	.453	.155
12. Angle SD							
13. Extreme Long Shots					.400	.411	-.143
14. Long Shots	89--	78--	79--	65--	.764	.832	.155
15. Medium Long Shots	92	86	88	73	.823	.926	-.135
16. Medium Shots					.926	.701	.277
17. Medium Close Shots	90.6	81.3	84.2	68.3	.769	.062	.050
18. Close up Shots					.867	-.171	-.192
19. Extreme Close Shots					.849	----	----
20. Distances/Shot							
21. Mean Distance					.771	.543	.002
22. Distance SD							
23. Mixed Sound	94.7	84.8	92.0	81.3	.869	.898	.555
	(2)	(1)	(3)	(2)		(4)	(6)
24. Synchronized Sound Effects	96.8	91.4	86.6	65.9	.951	----	----
	(2)	(1)	(3)	(2)			
25. Asynchronized Sound Effects	93.6	82.4	84.7	43.8	.373	----	----
	(2)	(1)	(3)	(2)			
26. Dubbed Voice	96.8	93.2	92.9	87.0	.974	-.242	.942
	(2)	(1)	(3)	(2)		(4)	(6)
27. Voice Over	96.8	75.0^a	92.7	41.1^a	.903	-.897	.367
	(2)	(1)	(3)	(2)		(4)	(6)
28. Music	99.0	97.4	96.4	91.5	.948	.601	-.225
							-.402
	(2)	(2)	(3)	(3)		(4)	(6)
29. Narration	100.0	----	100.0	----	.830	----	-.200
	(2)		(3)				(6)

Table 22 (cont'd)

	Percent Agreement				Correlations		
	1	2	3	4	5	6	7
	E_1/E_2 (3 Films)		E_2/O (5 Films)				
Film Technique	Percent of Total Shots/ Cells	Percent of Total Checks	Percent of Total Shots/ Cells	Percent of Total Checks	Eadie/ Baracca (42)	$Coder_1$/ $Coder_2$ Same Film (15)	$Coder_1$/ $Coder_2$ Diff Film ([illegible]3)
30. Establishing Shots	98.8	00.0^a (1)	98.8	00.0^a (2)	.158	1.000	-.141
31. Master Shots	93.3	48.4^a	95.8	58.0^a	.495	.100	.221
32. Transition Shots	84.0	46.0	82.8	15.3	.404	-.076	.118 .096
33. Cuts	60.4	61.3	59.3	49.1	.841	.520	.406
34. Matched Cuts	60.4	64.5	59.8	62.7	.929	.758	.645
35. Parallel Construction	99.3	50.0^a (2)	95.2	25.0 (4)	.853	.737	.157 .117
36. Reverse Angle Cuts	93.1	44.4	88.3	25.2^a	.545	-.025	.400
37. Point-of-view Shots	100.0	----	99.3	00.0^a (1)	.800	1.000	----
38. Cut-away Shots	98.8	93.3^a	94.4	00.0^a	.445	.318	.068
39. Inserts	100.0	----	100.0	100.0^a (1)	.209	.359	-.056
40. Jump Cuts	100.0	----			.970	----	----
41. Jump Cut Errors	92.6	75.3	85.2	52.6	.500	.038	.541
42. Black Shots	100.0	----			.654	----	----
43. Black Errors	100.0	----	99.1	50.0^a (2)	.149	.231	-.085 -.121
44. Flash Frame Errors	89.9	38.9^a (2)	83.6	00.0^a (4)	-.016	-.211	.626
45. Zooms	98.8	83.3^a	97.4	48.2^a	.962	.777	-.174
46. Connecting and Framing Pans	82.8	65.2	70.4	36.6	.383	.418	.255 .117
47. Following Pans	97.2	97.9	87.0	81.6	.793	.909	.469
48. Tilts	79.3	81.2	57.7	47.4	.180	.172	.339
49. Tracking Shots	98.6	75.0^a (2)	92.7	16.7^a (4)	.945	-.114	.382
50. Reverse Angle Pans	98.1	55.6^a	94.6	00.0^a (4)	.085	-.220	.479 .385
51. Focusing Errors	94.5	31.7^a	90.0	8.0^a	.585	-.209	.386
52. Framing Errors	79.6	61.3	82.2	37.1	.553	.124	.582 .381
53. Exposure Errors	87.8	45.2 (2)	83.2	49.5 (4)	.398	.771	.217
54. Unsteady Camera	80.2	82.7	65.6	47.7	.301	.697	.124 .059
55. Artificial Lighting	100.0	100.0	96.5	72.7	.973	.973	-.022 -.140
56. Natural Light	89.3	91.0	82.3	80.1	.921	.986	-.078 -.148

Table 22 (cont'd)

	Percent Agreement				Correlations		
	1	2	3	4	5	6	7
	E_1/E_2 (3 Films)		E_2/O (5 Films)				
Film Technique	Percent of Total Shots/ Cells	Percent of Total Checks	Percent of Total Shots/ Cells	Percent of Total Checks	Eadie/ Baracca (42)	Coder$_1$/ Coder$_2$ Same Film (15)	Coder$_1$/ Coder$_2$ Diff Film (33)
57. Special Effects	100.0	----	98.5	00.0[a] (1)	.256	----	----
58. Pixilation	100.0	----	100.0	----	.788	----	----
59. Animation							
60. Titles	100.0	100.0	99.1	86.7	.800	.801	-.220
61. Credits	100.0	94.5 (2)	99.1	83.0 (4)	.838	.811	-.172
62. Non-live Shots	100.0	99.6	92.6	93.9	.988	.980 (10)	.045
63. Shots		98.9		96.1	.997	.996	.076
64. Time					.999	.705 (4)	.292
65. Shot Length							
66. Total Errors					.624	.663	.227 -.010

Note--. Numbers in parentheses are numbers of pairs used in making the calculation. "----" indicates that no calculation was possible.

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[a] An average of less than ten percent of the shots in these films were coded in this category.

addition, the computation of percentages for camera distances and camera angles was handled differently than for the rest of the techniques. In order to clarify our methods of handling these complexities, the precise formulas for percentage calculation are presented below.

For Camera angle and Camera distance:

Method 1. Numerator = 7 X ((sum of number of shots in both protocols) - (number of shots defined in one but not both protocols)) - (number of disagreements in shots commonly defined in both protocols)
Denominator = 7 X (sum of number of shots in both protocols)

Method 2. Numerator = (number of checks in both protocols) - (number of checks appearing in one protocol but not in a commonly defined shot in the other)
Denominator = (number of checks in both protocols)

For all other techniques:

Method 1. Numerator = (number of shots commonly defined in both protocols which are coded in the same way, checked or blank)
Denominator = (number of shots commonly defined in both protocols)

Method 2. Numerator = 2 X (number of shots commonly defined in both protocols which have both been checked)
Denominator = (number of checks in both protocols)

The second type of statistic computed was a Pearson product-moment correlation coefficient. These coefficients are reported in columns five through seven in Table . The correlations in columns five and six were computed using the total number of checks for each technique on the various protocols. Those in column seven were calculated on the variables after they had been transformed as described above.

Other Potentially Codable Technical Aspects of Film

A number of other frequently occurring technical or structural elements of film have been identified in film literature or in our own work which were not treated in our analysis. A number of these are described here in an attempt to suggest future avenues of research. Many of these elements involve the film maker's use of the camera in constructing images. This is an area in which our work is rather deficient and which might well prove at least as rewarding as those areas in which we have worked.

Number of scenes. This variable was not included because of our initial difficulty in defining it in an adequately objective way. Subsequent thought and preliminary study suggest that a scene can be defined as a sequence of shots in which the same set of characters (allowing for the arrival and departure of minor characters such as a waiter in a restaurant scene) carry out a single set of actions in a single location (location being broadly defined where an action such as a chase is involved) over a continuous period of time. Any change in characters, in action, in location, or in the continuity of time (within the film narrative) would thus signal the end of a scene.

Temporal manipulations. Film lends itself to the distortion of time within its narrative structure. Several types of manipulations are possible but they occur infrequently enough in the children's films that they should probably all be coded as a single variable. Such things as flash backs and forward, slow and fast motion, and intercutting to extend real time would be coded here.

Interleaf construction. An editing technique whereby succeeding shots from the same scene cut back and forth between interacting characters (as in dialogue or in a chase scene).

Two-shot. Two characters shown at relatively equal distances from the camera in a stable configuration.

Reaction shot. A cut, cut away or zoom in to a close or medium close shot of an observer (or observers) to show their reaction to a preceding action.

Intro shot. Extended view of a new character(s), often involving a zoom, in which the character is generally involved in relatively innocuous behavior such as walking or riding toward the camera.

Terminal shot. The final live shot in the film in which one of a number of techniques is used to create a final statement or mood, to mark the end and, perhaps, to make a connection between the film and other forms of fantasy and reality. Some typical techniques include a long shot of the hero(s) walking or riding off into the distance or a zoom out from a character or other symbol to place him/it in a larger setting. Some children use shots like this; many do not; a few use more than one.

Juxtaposition shot. A shot in which an object or person, or part thereof, in the foreground of a shot is juxtaposed to an object, person or landscape at a distance. This type of shot reverses the normal figure-ground relationship.

Silhouette shot. One or more characters or objects are shown outlined by a bright light source.

Summary

Given the various techniques that were used we can say that the results of the first two columns in Table 22, which measure the agreement of coder Eadie with himself after a six month interval show for most categories a reasonable degree of consistency is maintained. The categories that are the lowest were generally those in which there were fewer examples in the film in question.

Columns three and four are percentage agreements calculated between Eadie and the final group supervisor, Frank Baracca. These are based on a set of five films. These show a reasonable degree of consensus in most categories. Column five are the correlation coefficients between the totals for the entire set of films minus one (42), of the codings by Eadie and those summarized for his group of coders by Baracca. These are again fairly high. Column six is the correlation between two other coders within the Baracca group on a set of fifteen films for the summary data. These are in general very poor indicating the difficulty that occurs without careful supervision. They are included here, however, because they help to highlight which of the techniques are inherently more difficult to code reliably. Column seven are correlations between summary data for five other coders over 33 pairs of films. In each case each coder scored two different films. What the coefficients indicate are the coders' agreements with themselves independent of film techniques. These coefficients should be low or zero, but some are high indicating that for those techniques they are as consistent with themselves as with other coders! This self consistency was most pronounced in the codings of sound and errors.

The virtue of all these kinds of data is that by reading across the rows from one to six and averaging the percentages and coefficients we can arrive at a rough estimate of the coding difficulty for each technique. In column seven the order is reversed. What such a reading shows is that the techniques which were easier to code were:

> camera angle; camera distance; sound in general; lighting; locations; interiors; exteriors; zooms; following pans, tracking shots, titles; credits; non-live shots; total shots; and film length.

Tecnniques that were least reliable were:

> many of the errors (focusing, framing, exposure, flash frames); editing in general (except cut aways and black); special effects (except pixillation).

The major difference observable here is between the more objectively definable variables of camera work and the more subjectively definable variables of editing. Eisenstein is famed for his statement that film making is mainly about editing or montage. What we have shown here is that from that viewpoint what we have been able to code most easily is from an artistic point of view of least importance.

CHAPTER XI

FACTOR ANALYSES OF FILM TECHNIQUES

Using the scores across the 43 films on film techniques coded arduously as described in the last chapter, we next proceeded to two kinds of analysis. The first was a factor analysis and the second various analyses of variance, covariance and multiple regressions involving comparisons across our variables of age, sex, one-shot film makers versus film makers who made several films, early versus later films, etc.

1. Factor Analytic Techniques

We present here the results of comparisons of factors as derived from several factoring techniques. Forty-two variables as derived from our analysis of the 43 child-made films were factor analyzed using two factoring techniques and four types of rotation. The factoring techniques applied were (a) principal-components solution (PC) and (b) principal factoring with iteration (PF). A principal-components solution involves deriving components, or factors, which are exact mathematical transformations of the original variables and requires no assumptions about the relationships among the variables. On the other hand, a principal-factors solution assumes that each variable is composed of both a unique portion and a portion which is determined by underlying variables which also influence other variables in the analysis. In addition, the second procedure involves a series of steps, or iterations, in which the attempt is made to reach the best possible estimate of the true value of the proportion of each variable's variance which is determined by the underlying variables.

Factors derived by these two techniques were then rotated using either the "varimax" procedure which produces orthogonal factors or the "direct oblimin" procedure provided in the Statistical Package for the Social Sciences' factor analysis program. This second procedure produces oblique factors in which the degree to which the factors are allowed to correlate with each other is controlled by the user through specification of a number from minus infinity to plus one. Solutions providing three levels of obliqueness were produced. These were moderately oblique (-1), fairly oblique (0) and very oblique (.5).

Both factoring methods produced eleven factors with eigenvalues greater than one. (An eigenvalue of one indicates that the associated factor accounts for the same amount of variance as does the average original variable.) However, because the twelfth factor had an eigenvalue of .979 (2.3% of the total variance) and because the twelfth factor seemed to be theoretically interesting, the PC oblique rotations involved twelve factors rather than the eleven which were included in the other solutions. Also, because we were more interested in the oblique solutions, the varimax rotation was performed on the PC solution only.

The variables which loaded on each of the eleven common factors are listed in order of decreasing magnitude of their factor loadings in the attached tables. Only variables which had loadings of $\geq |.30|$ are included. Each table indicates variables loading $\geq$ .60., as well as variables with negative loadings $\leq$-.60. The heading of each column indicates which type of solution produced the factor in question. PC, O-1, for example, indicates a principal-components solution with a moderately oblique rotation.

For each set of factors the two or three solutions which seemed the most complete and of the most theoretical interest were starred and ranked. When these ranks were totaled over the eleven factor sets, the two most oblique solutions received identical average rankings of 15.5. The principal components varimax and fairly oblique solutions were second with total rankings of 8.5.

As an inspection of Tables 23 to 33, presented on pages 318 to 328, indicates, the first four or five sets of factors are quite similar, independent of type of

Table 23

42-Variable Factors:

Lack of Control versus Sophisticated Film Making

Factoring and Rotation Method[a]	PC VM	PC O-1	PC O-O	PC 0.5	PF O-1	PF O-O	PF 0.5
Factor Numbers	1	1	1	1	1	1	1
Variable Factor *r* GE .6	Tilt Angle/shot Follow pan Unsteady Dist/shot Med hi shot	Tilt Med hi shot Follow pan Angle/shot Unsteady	Tilt Follow pan Med hi shot Angle/shot Unsteady	Tilt Angle/shot Follow pan Unsteady Med hi shot Dist/shot	Tilt Angle/shot Med hi shot Follow pan Unsteady	Tilt Angle/shot Med hi shot Follow pan Unsteady	Tilt Angle/shot Unsteady Med hi shot Follow pan
Variable Factor *r* LT .6	Frame error Medium long Medium shot Jump error Mixed sound Music	Dist/shot Frame error Medium long Mixed sound Medium shot Music	Dist/shot Frame error Medium long Mixed sound Music Jump error	Medium shot Frame error Jump error Mixed sound Music Medium long Expose error	Dist/shot Frame error Medium shot Medium long Mixed sound Music Jump error	Frame error Medium long Medium shot Mixed sound Jump error Music	Frame error Jump error Medium long Medium shot Mixed sound Music
Negatively Loaded	Location/t Jump cut Black Spec effect	Black Spec effect Zoom	Black Jump cut Zoom Spec effect	Location/t Black Spec effect	Zoom Spec effect Black	Zoom Black Spec effect	Location/t Zoom Jump cut Black Spec effect

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[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; O = Oblique rotation
-1 = Moderately oblique; O-O = Fairly oblique; 0.5 = Very oblique

Table 24

42-Variable Factors:

Long Films With Long Shots versus Closer Shots and Shorter Films

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	2	2	2	2		2	2
Variable Factor r GE .6	Extreme long Long shot Estab shot Snd eff over	Extreme long Long shot Film length Estab shot Snd eff over	Extreme long Long shot Film length Estab shot	Extreme long Long shot Estab shot Snd eff over		Extreme long Long shot Estab shot Snd eff over	Extreme long Long shot Snd eff over Estab shot
Variable Factor r LT .6	Dist SD Film length Tracking	Tracking Dist SD Zoom	Snd eff over Tracking Dist SD Zoom	Dist SD Film length Tracking		Dist SD Film length Tracking	Dist SD Film length Tracking
Negatively Loaded	Frame error Medium shot Interiors Close up Expose error Med close	Frame error Med close	Med close Frame error	Frame error Medium shot Interiors Close up Expose error Med close		Jump error Medium shot Frame error Expose error Med close	Medium shot Frame error Interiors Expose error Med close

---

[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; 0 = Oblique rotation
-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

Table 25

42-Variable Factors:

Sophisticated Planning and Editing Technique versus Unsophisticated Camera

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	3	4	4	4	4	4	4
Variable Factor r GE .6	Pt of view Black Cut away Parallel con	Cut away Black Pt of view	Black Pt of view Cut away Parallel con	Black Pt of view Cut away Parallel con	Cut away Black Pt of view Mixed sound Voice over Parallel con	Black	Pt of view Black Cut away
Variable Factor r LT .6	Tracking Voice over Spec effect Interiors	Parallel con Spec effect Voice over	Voice over Spec effect Interiors Tracking	Interiors Voice over Spec effect Tracking			Parallel con Voice over Interiors Tracking Spec effect
Negatively Loaded		Med close Location/t Horizontal Dist/shot	Follow pan Horizontal Angle/shot Dist/shot	Horizontal Unsteady Medium long Dist/shot Angle/shot Follow pan	Location/t Med close		Dist/shot Medium long Angle/shot Follow pan

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[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; O = Oblique rotation
-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

Table 26

42-Variable Factors:

Medium Low and Angle Variability and Parallel Construction

Factoring and Rotation Method[a]	PC VM	PC O-1	PC O-O	PC O.5	PF O-1	PF O-O	PF O.5
Factor Numbers	6	3	3	3	3	3	3
Variable Factor *r* GE .6	Medium low Angle SD Parallel con	Medium low Angle SD Parallel con	Medium low Angle SD	Medium low Angle SD	Angle SD Medium low Parallel con	Angle SD Medium low	Angle SD Medium low
Variable Factor *r* LT .6	Synch sound	Pt of view Dist SD	Parallel con Dist SD	Parallel con Dist SD Dist/shot Angle/shot	Pt of view Black	Parallel con Dist SD	Parallel con Dist SD
Negatively Loaded	Shot length Medium high	Medium high	Interiors Medium high	Medium high Interiors	Medium high Horizontal	Shot length Medium high Horizontal	Horizontal Medium high Shot length Interiors

---

[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; O= Oblique rotation
-1 = Moderately oblique; O-O = Fairly oblique; 0.5 = Very oblique

Table 27

42-Variable Factors:

Multiple Indoor Scenes versus Unsophisticated Outdoor Films

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	9	5	5	5	5	5	5
Variable Factor *r* GE .6	Master shot Location/t	Voice over Master shot	Master shot Voice over Location/t	Master shot Location/t	Voice over Master shot	Master shot Voice over Location/t	Master shot Voice over Location/t
Variable Factor *r* LT .6	Voice over Med close	Shot length Mixed sound Voice dub Narration Tracking Location/t	Med close Interiors Voice dub	Voice over Interiors Med close Voice dub	Location/t Voice dub Interiors Shot length Med close Tracking	Interiors Med close Voice dub	Interiors Med close Voice dub Tracking
Negatively Loaded		Dist SD	Medium long Jump error Follow pan Dist SD	Long shot Jump error Dist SD Unsteady Frame error Follow pan Medium long	Dist SD	Unsteady Dist SD Frame error Jump error Medium long Follow pan	Frame error Unsteady Long shot Dist SD Follow pan Medium long

---

[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; O = Oblique rotation
-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

Table 28

42-Variable Factors:

Primitive Films with High Angles

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	10	7	7	7	7	7	7
Variable Factor r GE .6	High angle Jump error Connect pan	Connect pan	Connect pan Jump error	High angle Jump error Connect pan	Connect pan Interiors Med close Cut away Tracking Jump error Pt of view Black High angle Expose error	Jump error Connect pan	Jump error Connect pan High angle Unsteady Frame error
Variable Factor r LT .6	Expose error Frame error Angle SD Unsteady Med close	Med close Jump error Tracking High angle	Frame error Unsteady Shot length Dist/shot Med close Tracking Angle/shot Expose error	Expose error Medium shot Frame error Music Angle/shot Unsteady Angle SD		High angle Dist/shot Med close Expose error Frame error Unsteady Angle/shot Tracking Medium shot Tilt	Angle/shot Dist/shot Expose error Music Medium shot Med close Tilt
Negatively Loaded	Voice dub Horizontal	Voice dub Medium long Mixed sound Narration		Dist SD Horizontal	Horizontal Long shot Narration Medium long		Spec effect Voice dub

---

[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; 0 = Oblique rotation
-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

Table 29

42-Variable Factors:

Music on Primitive High Angle Films versus More Sophisticated Sound

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	11	8	8	11	8	8	8
Variable Factor r GE .6	Music	Music	Music	Music	Music High angle	Music	Music
Variable Factor r LT .6		Angle/shot Unsteady High angle Dist/shot Connect pan Frame error Mixed sound Jump error	Angle/shot High angle Unsteady Connect pan	High angle Connect pan	Angle/shot Jump error Unsteady Medium shot Connect pan Dist/shot Frame error	High angle Angle/shot Jump error Unsteady Connect pan Frame error Medium shot Mixed sound	High angle Mixed sound
Negatively Loaded	Interiors Synch sound Film length	Film length Synch sound	Film length Synch sound Interiors	Interiors Film length	Pt of view Interiors	Synch sound Film length Interiors Voice dub	Film length Interiors Voice dub
Negatively Loaded LE -.6	Voice dub	Interiors Voice dub	Voice dub	Voice dub	Voice dub		

---

[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; 0 = Oblique rotation
-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

Table 30

42-Variable Factors:

Sound Effects and Horizontal Shots

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	5	10	10	10	6	6	6
Variable Factor r GE .6	Synch sound Horizontal Film length	Snd eff over Horizontal	Synch sound Horizontal Snd eff over	Synch sound	Synch sound	Synch sound	Synch sound
Variable Factor - r LT .6	Snd eff over Mixed sound	Synch sound Film length Mixed sound Follow pan Long shot	Film length Mixed sound	Snd eff over Horizontal Interiors	Snd eff over Horizontal Film length Mixed sound	Horizontal Snd eff over Film length Mixed sound	Snd eff over Horizontal Film length Mixed sound Interiors
Negatively Loaded	Location/t Medium high	Jump cut Location/t	Jump error Medium high	Jump error Medium high Medium long	Medium high	Medium high	Medium high

---

[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; 0 = Oblique rotation
-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

Table 31

42-Variable Factors:

Special Effects versus Unsophisticated Films

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	7	12	12	6	10	10	10
Variable Factor r GE .6	Jump cut Spec effect Medium shot	Spec effect High angle Jump cut	High angle Spec effect Jump cut	Jump cut Spec effect	Jump cut Spec effect	Jump cut Spec effect	Jump cut Spec effect
Variable Factor r LT .6	Cut away	Horizontal	Horizontal	Medium shot Cut away	Interiors	Medium shot Interiors Cut away	Medium shot
Negatively Loaded	Dist SD Med close	Follow pan Expose error Dist/shot Med close Frame error Connect pan Music Unsteady Angle/shot Tilt	Unsteady Frame error Med close Angle/shot Music Connect pan Tilt Jump error	Unsteady Close up Tilt Med close Dist SD	Music Connect pan Jump error Dist/shot Follow pan Frame error Angle/shot Med close Tilt Unsteady	Tilt Dist SD Med close	Med close Dist SD
Negatively Loaded LE -.6		Jump error					

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[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; O = Oblique rotation
-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

Table 32

42-Variable Factors:

Detail Communication via Image versus Voice

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	8	9	9	9	9	9	9
Variable Factor r GE .6	Zoom	Close up Zoom Dist SD	Close up	Zoom Film length	Dist SD Close up	Dist SD Close up Zoom	Dist SD Close up Zoom
Variable Factor r LT .6	Dist SD Close up Film length Tracking Dist/shot	Film length Tracking Pt of view	Dist SD Film length	Dist SD Close up Tracking	Zoom Film length Tracking Pt of view	Film length Tracking Dist/shot	Dist/shot Tracking Film length
Negatively Loaded	Cut away Mixed sound Voice over	Jump cut	Jump cut	Voice over Frame error Medium high	High angle Voice over	Mixed sound Voice over	Voice dub Voice over

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[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; O = Oblique rotation
0-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

Table 33

42-Variable Factors:

Simple Sound versus Multiple Indoor Locations with Medium Close ups

Factoring and Rotation Method[a]	PC VM	PC 0-1	PC 0-0	PC 0.5	PF 0-1	PF 0-0	PF 0.5
Factor Numbers	4	11	11	8	11	11	11
Variable Factor *r* GE .6	Narration Medium long	Medium long Frame error Unsteady	Narration Medium long Mixed sound	Narration Mixed sound	Dist/shot Medium long Unsteady Frame error	Medium long Narration	Medium long Mixed sound Narration
Variable Factor *r* LT .6	Mixed sound Voice over	Follow pan Dist/shot Jump error Angle/shot Narration	Follow pan Voice over Unsteady Frame error Dist/shot Angle/shot	Voice over Medium long Follow pan Frame error Voice over	Angle/shot Jump error Follow pan Medium shot Narration Expose error	Mixed sound Follow pan Dist/shot Unsteady Angle/shot Frame error Voice over Horizontal	Follow pan Voice over Unsteady Angle/shot Frame error Dist/shot Horizontal
Negatively Loaded	Close up Med close Interiors	Master shot Locations Interiors	Close up Med close Interiors	Dist SD Interiors Med close Close up	Black Locations Interiors	Med close	Close up Interiors

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[a] PC = Principal component analysis; PF = Principal factors analysis
VM = Varimax rotation; O = Oblique rotation
-1 = Moderately oblique; 0-0 = Fairly oblique; 0.5 = Very oblique

solution and rotation. However, the lower ordered factors vary a good deal from one type of solution to another. A final point of interest is that, in general, the most oblique PC rotation seems to coincide much more closely with the orthogonal varimax rotated solution than do the more orthogonal oblimin solutions. This is true in spite of the fact that an inspection of the factor intercorrelations indicates that the .5 rotation solution has more large correlations than do the other oblique solutions.

After the above extensive analysis by the seven different factoring techniques, we selected the principal component analysis with the most oblique .5 rotation. The two rationales are: Theoretical. (a) The principal components analysis is preferred because it makes no assumption concerning the basic structure of the data whereas principal factors does and (b) the most oblique rotation is preferable because we had no reason to assume that legitimate factors in the data would be orthogonal and therefore we wished to allow the desired factors to be as oblique as the data required; Practical. Principal components with the most oblique rotation has as high an average ranking as any of the other methods of analysis. That is, after an exhaustive study of the derived factors which involved ranking the most conceptually satisfying factors in terms of their meanings to us, this method produced factors which ranked as high or higher than any other.

II. Factor Analytic Results

The twelve factors deriving from our analysis are indicated in Table 34, page 330, which provides the titles and abbreviations for the film techniques involved. These factors may be further described as follows.

Factor 1. Primitive Labile Camera is, as the title suggests, a factor which loads highly on most of the types of error which occur. Variables loading positively are indicated separately from those loading negatively. The major characteristic of this factor is the use of an unsteady camera. The meaning of the other character-

Table 34

Summary of Factors Produced From the Film Technique Analysis

Factor Number	Factor Name	Factor Variables			
		r GE .8	r GE .5	r LT .5, n.s.	negative r
1	Primitive, Labile Camera	Tilt Angle/shot	Follow pan Unsteady Medium high Dist/shot Medium shot Frame error	Jump error Mixed sound Music Medium long Expose error	Location/t Black Special effect
2[a]	Context	Extreme long Long shot	Est shot Sound eff over	Dist SD Film length Tracking	Frame error Medium shot Interiors Close up Expose error Med Close (r LE -.5)
3	Sophisticated Shot Selection	Medium low Angle SD	Parallel con	Dist SD Dist/shot Angle/shot	Medium high Interiors
4[b]	Sophisticated Editing and Planning	Black Pt of view	Cut away Parallel con	Interiors Voice over Special effect Tracking	Horizontal Unsteady Medium long Dist/shot Angle/shot Follow pan
5[a,b]	Multiple Indoor Locations	Master shot	Location/t Voice over Interiors	Med close Voice dub	Long shot Jump error Dist SD Unsteady Frame error Follow pan Medium long (r LE -.5)

Table 34 (cont'd)

Factor Number	Factor Name	Factor Variables			
		r GE .8	r GE .5	r LT .5, n.s.	negative r
6	Special Effects	Jump cut	Special effect	Medium shot Cut away	Unsteady Close up Tilt Med close Dist SD
7[b]	High Angle Primitivism	High angle	Jump error Connect pan Expose error	Medium shot Frame error Music Angle/shot Unsteady Angle SD	Dist SD Horizontal
8[a]	Simple Use of Voice		Narration Mixed sound Voice over Medium long	Medium shot Frame error Voice dub	Dist SD Interiors Med close Close up
9[b]	Distance Variability and Film Length	Zoom	Film length Dist SD Close up	Tracking	Voice over Frame error Medium high
10[a]	Sound Effects	Sync sound	Snd eff over	Horizontal Interiors	Jump error Medium high Medium long
11[a]	Dubbed Voice versus Music		Voice dub	Film length Interiors	Connect pan High shot Music (r LE -.8)

Table 34 (cont'd)

Factor Number	Factor Name	Factor Variables			
		r GE .8	*r* GE .5	*r* LT .5, n.s.	negative *r*
12[b]	Long Tracking Shots	Shot length	Tracking	Dist/shot Connect pan Horizontal Unsteady Med close Angle/shot Frame error	

Note--. The reader is referred to Chapter X for a listing and description of the variables presented in this table.

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[a] Analyses on these factors involved the second, smaller sample size in each case due to the elimination of cases with missing data (silent films).

[b] Factors which have been reflected in this table.

istics will become clearer in the subsequent analyses. Groups I and II in Griffin's analysis load heavily on this factor (Chapter IX).

Factor 2. Context. This factor reflects the use of the camera outdoors and the tendency to use both long shots and establishing shots to indicate the framing of the picture. There is use also of natural outdoor sounds. Items loading negatively indicate films indoors where people are followed and they alone used for framing.

Factors 3 and 4. These are sophistication with camera and with editing factors. As we shall see, there are very few correlates for these factors in our present analysis, except that we do know that one of the teachers was more often associated with the films loading positively on these factors. This was the teacher also responsible for the teaching of sound effects, dubbing, etc. While we have little to go on here, it appears to us that in his teaching he focused more exclusively on technique, whereas the other teachers were also concerned ideologically with the emancipative role of film making for working class children. Perhaps this produced the differences in sophistication.

Factor 5. Multiple Indoor Locations. The preference for indoors or outdoors turns out to be associated with sex differences, individual differences and different contexts at the earlier Rivington workshops as compared with our own Ludlow and Henry Street workshops.

Factor 6. Special Effects. This is the "trickery" kind of factor which most children used only once. It was a phase to go through in film making. If they used it early, they did not do so later. If not early, then later. It includes the third group of films in the Griffin analysis.

Factor 7. High Angle Primitive. For little known reasons some children preferred to take many high angle shots. These were usually girls and their films otherwise were quite primitive.

Factors 8, 10 and 11 all have to do with various aspects of sound making, and these differed very much between the sexes and by age level.

Factor 9. Distance Variability and Film Length was another kind of sophistication factor in which the maker showed considerable variability of technique.

Factor 12. Long Tracking Shots. This was very much of a factor involving long shots in which the camera itself moved. It was generally characteristic of young primitive films; in a few cases it was a sophisticated technique.

Below we present the prototypic films which load most heavily either positively or negatively on each of the factors in the above table. One can at this point look back to Griffin's analysis in Chapter IX and discover the analytic basis for his descriptions. (Table 36, which follows on pages 336 and 337, presents the factor loadings for all films on all of the twelve factors the factor loadings indicate the degree to which that film exemplified that factor.)

Table 35

Films Most Typifying Each Factor Positively and Negatively

Factor Number	Positive Films	Negative Films
1	The Detective	The Bionic Kid
2	Indians Who Have Tails Time	
3	Monster in Central Park The Addict	
4	Wrong Way to Make a Movie	
5	Channel 6 News I	
6	The Playful Phantom The Magic Stick	
7	The Murder The Cow Robber Friends	

Table 35 (cont'd)

Factor Number	Positive Films	Negative Films
8	Boxing Lost Girl	
9	Time The Bombs II	
10	The Addict The Cookie Show	
11	The Roach Killer Shoes Twin Magic	End of the World
12	The Pretty Pond Time	

III. Analyses of Variance, Covariance and Multiple Regression

Analyses of variance, covariance and multiple regression on the twelve factor scores and on the 62 techniques which occurred with sufficient frequency to permit the analysis are of various kinds. For some analyses the whole 43 films can be used. For some analyses of the sound effects only 35 films can be used because only they have a sound track. Analyses are made in terms of age and sex. Age contrasts are between 7-10, 11-13 and 14+ year groups when there are sufficient films made by each group. Sex contrasts are between the younger groups because there were insufficient girls in the older group. Other independent variables were film maker status (one-shot versus many films made) and early versus late films (nine ANOVAs were used on the factors). The analysis of covariance had the age of film maker as covariate and sex and workshop as the independent variables, using the entire sample of 43 films but only 35, again, for the sound techniques (one analysis of covariance). Two multiple regression analyses were also conducted in which (a) the dependent variable was the factor score for late films and in which the independent variables were the age, sex, workshop, and first film score;and (b) which involved the change from first to last film as the dependent variable and as independent variables the age

Table 36

Film Loadings on Factors

Film #	Factor Number 1	2	3	4	5	6	7	8	9	10	11	12
1	1.56	-0.52	0.17	0.19	-0.74	-0.35	-0.27	0.10	0.29	0.28	-0.30	-0.46
2	-0.84	-0.46	0.71	0.64	0.28	-0.60	-2.39	-1.02	0.80	-0.85	-0.69	0.89
3	1.35	0.14	-0.45	0.70	0.96	-0.18	-0.12	0.83	0.92	-1.25	-0.08	-0.41
4	-1.10	-0.04	0.01	0.56	0.86	0.90	0.47	-0.30	0.52	-0.96	-0.39	0.03
5	0.59	-0.40	0.16	0.27	0.75	-0.77	0.52	2.38	1.06	-1.40	0.07	0.37
6	0.59	----	-0.91	0.16	----	-0.85	-0.27	----	0.49	----	----	-4.05
7	1.64	----	-1.60	-0.38	----	0.12	0.18	----	0.63	----	----	0.72
8	0.55	-0.87	-0.51	0.18	0.16	-0.24	-2.93	-0.30	-0.08	0.34	-0.61	0.32
9	0.98	-0.38	-0.72	-0.30	0.36	-0.85	0.12	0.32	-0.75	-0.48	-0.04	0.48
10	-0.74	-0.33	-0.78	-0.22	-0.80	-0.34	-0.98	0.55	0.29	0.45	-0.49	0.87
11	-0.27	0.52	0.46	0.57	0.80	0.67	0.58	-0.35	0.60	-1.30	0.71	0.69
12	0.71	-0.84	-0.69	-0.15	0.40	-0.34	-1.11	-1.24	-0.63	-0.34	-0.34	0.36
13	0.48	0.26	-0.13	0.31	0.90	0.45	-0.26	0.60	0.74	-1.52	2.99	-0.02
14	-0.94	----	0.36	0.54	----	-0.26	0.70	----	-0.75	----	----	0.71
15	0.05	-0.36	-1.41	-0.49	-1.06	1.44	-0.63	0.67	-0.60	2.10	-0.21	-1.16
16	-1.03	----	-0.31	1.03	----	-0.58	0.38	----	-1.66	----	----	-0.76
17	0.21	-0.10	1.68	1.14	-0.02	-0.49	-2.07	-0.24	-0.81	-1.17	-1.07	-1.62
18	1.12	1.12	0.57	-0.00	-0.41	0.68	0.02	0.21	0.98	-0.45	-0.53	1.02
19	1.29	----	-0.67	0.09	----	-0.23	0.37	----	0.29	----	----	-0.46
20	1.51	0.11	-0.68	0.34	0.50	0.05	0.09	0.24	0.55	-0.24	-0.37	0.23
21	1.29	-0.25	0.72	0.30	0.65	0.27	-2.40	-0.82	0.41	-0.64	-0.86	0.07
22	-1.36	0.51	0.07	-0.56	-0.09	-0.28	0.39	-0.33	0.21	0.08	-2.04	0.84
23	-0.16	3.45	-1.55	-0.11	0.50	-0.68	0.59	0.43	1.69	1.68	-0.57	-0.30
24	0.11	0.14	0.43	-0.07	0.16	-0.74	0.53	0.20	1.15	-0.26	-1.16	0.29
25	0.36	-0.59	0.04	0.67	-0.20	0.88	-0.73	3.92	-0.21	-0.27	-0.20	-0.79
26	-1.59	-0.71	-1.84	-0.03	-4.77	-0.98	0.63	-0.28	1.70	-0.00	1.69	0.66
27	1.89	0.72	0.20	0.82	0.57	-0.27	-0.00	-0.23	-0.07	0.86	1.30	-1.46
28	-0.94	-0.57	0.83	-5.12	-0.56	0.61	0.06	0.05	0.58	0.20	0.99	0.01
29	-0.14	----	2.56	-0.05	----	-0.80	-0.36	----	1.16	----	----	0.81
30	-0.78	----	-1.18	0.17	----	2.52	0.88	----	-0.01	----	----	0.26

Table 36 (cont'd)

Film #	Factor Number 1	2	3	4	5	6	7	8	9	10	11	12
31	-0.83	-0.32	-1.28	0.13	0.28	0.15	0.16	-0.72	0.81	0.08	2.30	1.02
32	-1.08	-0.16	0.57	-0.70	0.40	-0.77	1.08	-0.56	-0.92	0.70	0.66	1.05
33	-1.97	0.17	0.25	0.92	0.76	-0.19	1.25	0.00	-0.78	1.54	0.18	0.05
34	0.06	-0.73	2.20	0.77	-0.03	-0.04	0.35	0.49	-0.20	2.26	0.71	-0.62
35	0.65	-0.12	0.43	0.21	0.55	-0.26	0.24	0.21	0.50	-0.63	-0.46	0.20
36	-0.47	-1.53	1.13	-1.08	-0.72	-1.15	0.36	-1.34	-1.26	0.49	-0.09	0.42
37	-0.35	1.29	0.15	0.55	0.46	0.39	0.86	-0.70	-1.52	0.37	0.68	0.11
38	0.20	3.29	0.55	-1.18	-1.24	-0.11	0.06	-0.75	-2.61	-0.64	1.11	-2.19
39	-0.67	0.32	-0.51	0.99	1.16	-0.72	1.64	0.34	0.77	-0.60	-0.56	0.34
40	-1.24	-0.67	0.38	-1.34	-0.53	-0.43	1.66	-1.34	-1.63	-1.78	-1.04	-0.86
41	0.64	0.39	0.12	0.22	-0.45	-0.11	0.51	-0.91	-1.98	-0.48	0.78	0.69
42	-0.90	----	-1.29	-0.84	----	4.54	-0.80	----	0.28	----	----	1.11
43	0.85	-0.43	1.66	0.17	-0.31	-0.05	0.67	-0.01	-0.95	1.05	-0.09	0.56

of film maker when making the first film, sex,   factor score on the initial film, the interval in months between the dates of film production and finally the number of films produced between completion of early and late films. For this analysis (b) there were 17 pairs of films and 14 pairs for the sound techniques. Eleven ANOVAs were also conducted on the 62 techniques.

Given the multiple comparisons available to us, it seems desireable to present the results in terms of their implications for the present study. Although this bridges an important step in the process, it saves the reader some 50 pages of tables. We will therefore concentrate upon what the data has to say about (a) the differences between the workshop at Rivington before our time and the workshops at Ludlow and Henry Street with which we were associated. We will term this the workshop difference; (b) Next we can look at those differences which have to do with the age of the film makers. The contrast between these age effects and the experience effects gives us some measure of what is most important, the kind of built-in cognitive operations so much stressed in the animation study by Zarum or the learned film techniques equally stressed in the descriptive review of the films by Griffin; (c) We can look at the sex differences to be found; (d) The differences yielded between the films made early and later by the same children allows us to look at the difference due to experience and teaching; (e) There is the difference between the children who stay only long enough to make one film (the one-shoters) and those who stay to make several (the film makers); (f) Finally, there are styles of technical use.

A. Workshop Effects

Table 37 on page 339 contrasts the Rivington and Ludlow-Henry Workshops. It is interesting to note that most of the variables mentioned under Rivington are those used by Michael Griffin in his description of his Group I and II films which make movement both the substance and the technique of the film. Eighteen out of the

Table 37

Comparison of Workshops (Rivington versus Ludlow-Henry)[a]

Rivington	Ludlow-Henry
Primitive camera work (Factor 1)	Indoor locations (Factor 5)
Long shots and following pans (Factor 2)	Varied sound effects (Factor 10)
High angle shots (Factor 7)	Dubbed voice (Factor 11)
Medium low shots	Locations
Low angle shots	Medium close up shots
Angles per shot	Synchoronized sound
Varied angles	Transition shots
Medium long shots	Lighting (artificial)
Longer average distance	
Number of distances per shot	
Use of music	
Following pans	
Unsteady camera	
Outdoor natural lighting	
Total errors	

[a] Workshops were significantly higher on the variables listed below them ($p < .05$).

20 films he lists in that group were from Rivington. Several factors are at work here. The Rivington films, especially the camera work, were in general less sophisticated than those that were made at Ludlow-Henry. In their outdoor camera work the Rivington children seemed to have been left more to their own devices and as a result they have more camera unsteadiness and labile variability than do the Ludlow group. At the same time they made more outdoor films, apparently because it was their own neighborhood and they were relatively safe amongst their own minority group, making their typical pursuit films of dracula, vampires, etc. Why the girls at Rivington should make so many high angle shots (of dead boides, etc.) is not immediately clear. The children at Ludlow by contrast were not in their own neighborhood and preferred the safety of indoor locations. As a result their camera work was more directly under the supervision of their teachers and seems to have benefitted. The improvement shows up from their own early to late films (Factor 1), just as it is the late films that are superior to Rivington films in general. The Henry-Ludlow superiority on sound

effects, etc., is directly due to special help with those film elements by a teacher appointed to supervise that process (Gerry). It is noticeable that there are not as marked differences on the editing variables, suggesting that at Rivington also, when the children were inside and nearer the teachers, they were getting more useful help.

There is some superiority even in editing however (transition shots), so it follows that the teachers in our workshop may have been more diligent about their job than they and others were when they worked formerly at Rivington. They had introduced new techniques for this special project and they had spent a great amount of time with the investigators, who were constantly observing them. It would not be surprising if under these glass box conditions, there was on their part a more focused teaching effort (Hawthorne effect) than in the earlier situation at Rivington. There were also more of them and they felt better able to work with the older children at Ludlow-Henry than the younger children at Rivington.

We should emphasize that this is a fairly marked example of the way in which the setting and arrangements within which the film teaching occurs can itself have a direct impact, in a technical and quite unintended way, on the character of the films that are made.

B. Age Effects

We can contrast three groups: the eight year olds (7-10), the eleven year olds (11-13) and the fourteen year olds (14-16). Age loads on two of the factors. On Factor 9, Distance Variability, the older children (14>11>8) made more use of zooms, close-ups and distance variability. In the present data this is the only one of the factors for which we get the hint of the determining effect of an underlying cognitive operation. The other factor which loads on age is Factor 11, Dubbed Voice and Music. Here the shift is from the youngest, who most often simply use music, to the middles, who dub voices, to the oldest, who mix their techniques. Perhaps the mixture of techniques requires the greater ability to adopt multiple concurrent perspectives, which older children might presumably possess. Differences from the ANOVAs are as follows.

Table 38

Age Contrasts

Variable	Eight Years	Eleven Years	Fourteen Years
Location	least	more	most
Interiors	least	more	more
Medium High Shots	most	least	least
Angles per Shot	most	least	least
Dubbed Voice	least	most	more
Music	most	least	more
Transition Shots	least	most	least
Matched Cuts	most	least	least

Unfortunately these contrasts oversimplify, as they are sometimes true of both sexes and sometimes of only one. There are also interactions with experience, as the prior tables indicate.

C. Sex Effects

The sexes differ on two of the factors. The females remain high on High Angle Primitivism (Factor 1), which the males alone shift away from in later films. Boys also improve on Factor 1 and girls do not. The largely Puerto Rican girls at the Rivington project showed this proclivity for having their characters on the ground. They either sit on the ground, are dead on the ground, or hop about at a low level, all perhaps arising from traditional mother-baby play.

The males, for their part, showed a preference for sound effects, while the females are more interested in the use of music and voice. The difference was produced largely by the younger males. Older males were more like females.

In this study, the females changed less with experience despite the fact that they were more intelligent than the boy volunteers. Perhaps, as Zarem remarks in her study, access to technical mastery was rarer in the girls' experience. We do not have evidence that their relative lack of success came from attempting more difficult portrayals of feeling, though as has been mentioned, the male dominated nature of the workshops may have constricted the girls' efforts at what they were willing to attempt.

D. Experience Effects

Table 39

A Comparison of Films in Terms of Experience in Film Making[a]

Early Films	Late Films
Number of angles per shot	Narration
Average angle	Establishing shots
Medium close shots	Matched cuts
Medium shots	Natural light
Distance per shot	Special effects
Voice over	Number of shots
Transition shots	Length of film
Reverse angle cuts	
Cut aways	
Jump cut error	
Black error	
Flash frame	
Zooms	
Tilts	
Reverse angle pan	
Framing error	
Exposure error	
Titles	
Non-live shots	
Total errors	

[a] Early versus late films are significantly higher on the variables listed below them ($p<.05$).

Most of the differences in Table 39 are produced by the errors and lability of camera of the film makers in their early films. Medium close shots and distance are conventional ways of shooting and characterize the early films. The use of titles by the younger children indicates their less firm grasp of ways of framing their films and their choice of the more caricatural technique. Older children use establishing shots. The transitions, reverse angle cuts and cut aways have to do with the early film makers' concentration on the movements of their characters (as in the Griffin analysis of Groups I and II). This is a result of a lot of poorly constructed scenes, whereas later scenes are more carefully constructed.

Table 40

Factor Changes From Early to Late Films

Factor Number	Factor Name	Change
1	Primitive, Labile Camera	-.93
2	Context	.12
3	Sophisticated Shot Selection	.14
4	Sophisticated Editing and Planning	-.14
5	Multiple Indoor Locations	-.24
6	Special Effects	.31
7	High angle Primitivism	-.88
8	Simple Use of Voice	-.01
9	Distance Variability and Film Length	.08
10	Sound Effects	-.11
11	Dubbed Voice versus Music	.22
12	Long Tracking Shots	-.44

The extent to which each of the factors changes in its loadings from early to late films is shown in Table 40. What is happening here is that primitive camera work and error decreases markedly (Factors 1, 7 and 12). Though there are clear improvements in the mastery of dubbing and music and special effects (Factors 11 and 6), there is not, in this group, such marked progress in the other sophistication factors (Factors 2, 3 and 4). The films have moved from Mike Griffin's Groups I and II to his Groups III, IV and V. It is not evident in our data that children are learning to produce his sophisticated Group VI film. Some film makers may produce them, but it is not an effect of the workshop experience. The increased movement outdoors is produced by the Ludlow group gaining in experience and confidence in their later films. As we have noted, the Rivington group began outdoors in the first place.

Other changes occurring with experience are that those who made more indoor films also made more films, it presumably being a more controllable way to go about it.

Table 41

Changes Due to Number of Films That Were Made Between the First and the Last

Techniques Which Increase[a]	Techniques Which Decrease[a]
Horizontal shots	Transition shots
Tracking shots	Reverse angle cuts
Voice over	Following pans
Music	Focusing errors
Special effects	Framing errors
	Credits

[a] All changes significant at $p < .05$.

The most persistent finding was one of regression to the mean where children who had been high or low on particular techniques initially changed towards the average. Presumably teaching here, as in most art classes, had an homogenizing effect on the children. Some factor effects of making films were as follows. The longer the time interval between making the first and the second film, the higher the probability the child would do the second one out of doors (Factor 5). On the other hand, if he had made many films the chances were that his last film would be indoors. High Angle Primitive films (Factor 7) were more likely to improve if several films had been made in the interval and the maker was female. Older children tend to improve more (that is, use these shots less) by making more films than do the younger ($p < .06$). Factor 11, which involves the use of dubbed voices and music, was more likely to occur if there had been a long interval between film making. Frequent film makers used these techniques less. Both of these findings imply that those who made more films usually became more sophisticated, but that this was an effect more noticeable for the females and for older children.

Table 42, in which the contrast involves the number of months between each film, produces an opposite kind of effect. It is as if a longer period away from film making increases forgetting or regression.

Table 42

Number of Months Between First and Last Film

Techniques Which Increase[a]	Techniques Which Decrease[a]
Medium long shots	Music
Transition shots	Special effects[b]
Reverse angle cuts	High angle shots
Following pans	
Tracking	
Focusing errors	

[a] All changes significant at $p < .05$.
[b] $p < .10$)

The acid test of the teaching has to be applied to those who did the most productive work and it is these children who are featured in Table 43 below. Most noticeably, their films are less primitive (Factors 1, 7 and 12).

Table 43

Mean Factor Change for Those Who Made Many Films

Factor Number	Factor Name	Change
1	Primitive, Labile Camera	-.93
2	Context	.12
3	Sophisticated Shot Selection	.14
4	Sophisticated Editing and Planning	-.14
5	Multiple Indoor Locations	-.24
6	Special Effects	.31
7	High Angle Primitivism	-.88
8	Simple Use of Voice	-.01

Table 43 (cont'd)

Factor Number	Factor Name	Change
9	Distance Variability and Film Length	.08
10	Sound Effects	-.11
11	Dubbed Voice versus Music	.22
12	Long Tracking Shots	-.44

Table 44

Changes in Specific Age Groups[a]

	Younger (7-10)	Middle (11-13)	Older (14+)
More	Outdoors Establishing Shots Matched Cuts		Indoors Point of View Inserts Tracking Reverse Angle Pans Artificial Lighting Distance Variability, Zooms, etc. (Factor 9)
Less	Artificial Lighting		Voice Over Cut Aways

[a] All changes significant at $\underline{p}<.05$.

Our general conclusion here is that editing is more affected by experience than is camera work. If true, then Piagetian kinds of limits apply more to editing than to camera work. Considering that editing requires more individual decision making, this is perhaps not surprising.

Table 45

Sex Differences in Age Change Scores[a]

	Male	Female
More	Inserts	Variability in Distance Asynchronous Sound Effects
Less		Medium High Shots Jump Cut Errors Flash Frame Errors

Table 45 (cont'd)

	Male	Female
Less		Tilts Reverse Angle Pans Exposure Errors Total Errors

[a] All differences significant at p .05.

E. Film Maker Effects

Table 46

Differences Between Those Who Made Only Film and Dropped Out

Versus Those Who Made Several Films[a]

One Shot Film Makers	Enduring Film Makers
Voice Dubbing and Narrative (Factor 8) Labile Use of Camera (letting it run with little control) (Factor 12)	Higher Angle Shots

[a] One shot versus enduring film makers are significantly higher on the variables listed below them ($p < .05$).

Those who dropped out seemed to be more given to the use of easier techniques. The male one shot makers were more outdoor in camera location and more labile in camera use, suggesting perhaps a different kind of personality. Mere use of dubbing and narrative is a relatively quick and hasty way of proceeding.

F. Style of Technique

One of the most interesting discoveries arising out of this study was the finding that some of the technical variables were not associated with age, sex or experience, but were associated with the first film that was made. This means that there was a tendency for some technical practices to be chosen by children and adhered to throughout regardless of other influences. We felt entitled to regard these practices as stylistic, representing the kinds of individual variability which are critically important in the arts. Those variables which show such signs of stylistic character with their respective loadings and levels of significance are presented in Table 47.

Table 47

Styles in Film Making

Variables	Total F^a	Specific F^b
A Preference for Parallel Construction versus Serial Plot Development	2.08	4.99*
A Consistency in Film Length	4.59*	3.93+
Master Shots	1.36	2.80
A Preference for High Camera Angles	6.08**	16.30**
A Preference for Many versus Fewer Locations	1.82	4.15+
A Preference for Interior versus Exterior Locations	2.42	2.79

+ $p < .10$
* $p < .05$
** $p < .01$

[a] Required level for significance = 3.41.
[b] Required level for significance = 4.67.

The significance levels suggest that of the styles mentioned here the following might be worthy of further study: (a) parallel versus serial plot development; (b) consistency in film length; (c) preference for high camera angles; and (d) many versus fewer locations (perhaps).

Discussion of Style Variables

There are a number of recent reviews of stylistic variables in the psychological literature and we will use these to suggest the fuller meaning of the expressive style variables we have discovered (Kogan, 1976; Goldstein & Blackman, 1978). Kogan has distinguished between various types of styles according to:

I. Whether they imply that accuracy or inaccuracy is part of their character (that is, they are something like abilities). Under this heading he includes the concepts of field dependence-independence (Witkin & Goodenough, 1976) and constricted versus flexible control (Gardner, 1953).

II. The second kind of style cannot be characterized in terms of veridicality of performance, but one end of the dimension is usually said to be preferred to the other. Thus, analytic categorization seems to be preferred to non-analytic categorization (Kagan, et al., 1963) and reflectivity over impulsivity (Kagan, et al., 1969).

III. The third kind are said to be purely stylistic and free of such connotations. For example, whether a perion groups objects into categories of wider or narrower span seems to be an idiosyncratic, not an ability nor a more complex, response (Pettigrew, 1958).

Most of the styles in the cognitive literature have been of the former two kinds. Yet if the concept of styles is to be of greatest value for our understanding of basic individual differences, it is the third kind that offer the most promise. They would seem to exist in a domain between ability and motivation, where individuals go about the things they most care to do in a variety of unique ways. All of the styles discovered here seem to be of this third character. Consideration of each of our expressive camera styles suggests the following possibilities.

A. A Preference for Parallel Construction Versus Serial Plot Development

From Piagetian theory, it could have been assumed that a chaining strategy (of one shot contiguous to the next) would have been used by the younger children, and a parallel action strategy by the older, as we have ourselves found in narrative construction (Botvin & Sutton-Smith, 1977). But, on the contrary, within the age range studied here (3 to 15 years), we have found that there are some who prefer to do one thing at a time and follow the main character through until the end, and others who prefer to have at least two things going on at the same time and to cut back from one to the other. It should also be noted that this characteristic is not related to sex or to experience in our data. This looks something like the information processing strategies called successive and simultaneous processing (Das, 1973), which others have associated with kinds of lateralization (Bogen, 1975) and yet others with kinds of preferences for learning (Wittrock, 1975). In everyday parlance, we are indeed familiar with the notion that it is "better to do one thing at a time," "to follow something through to its conclusion," "to stick to your last," as contrasted with the view that "he can keep many things afloat at the same time," "he can juggle many balls," "he is a man of many parts," etc. There is very real prospect, therefore, that what we have encountered in this non-verbal area may be of much deeper import and implication for how teachers should approach different children. There are many examples in schooling of linear versus parallel programming. What seems probable is that these may effect children quite differently.

B. A Consistency of Length of Films Produced

That some prefer to stay with their subject longer than do others, that some are more persistent and some less so, is a well known personality or characterological variable. Although persistence clearly implies temporal duration, this has not usually been introduced to discussions on the subject. Duration of search, however, is an important variable in information theory (Newall & Simon, 1972) and has recently been shown to be a critical predictor of career persistence in the graphic arts (Getszels & Csikszentmihayli, 1976).

In the successive factor analytic rotations that we used one factor that was particularly stable was that of film length. It included the variable of time, number of shots, absolute number of locations, extra long shots, long shots, variability in distances, tracking shots, establishing shots and reverse angle shots. Those techniques that are not directly related to time here actually take a long time to do, hence presumably their covariance in this factor.

C. High Versus Low Camera Angle Preference

Although individuals persist in their tendency to use either high or low angle approaches to filming, there are some interesting other correlates that give us a preliminary idea of the nature of this style. We know, for example, that there is also a sex difference in which females favor high camera angles. Given that there are male-female differences in styles of eye contact which have been associated with individual differences in nurturance and abasement, it is not improbable that this style is related to other kinds of interpersonal relationships (Libby & Yaklevich, 1973). Two of our more stable varimax factors also dealt with, on the one hand, high angle sophistication versus unsophistication and, on the other, low angle sophistication versus unsophistication.

D. A Preference for Many Versus Few Locations

The film maker who uses many locations as compared with few seems on the surface to be more hyperkinetic and less reflective. There is indeed a considerable literature on hyperactivity (Ross & Ross, 1976) and impulsivity (Kagan, et al., 1964), and good reason for thinking that these are at base "temperamental" variables. A preference for a lot of movement and a lot of variability when performing a task, and hence more stimulation, may be at base here. But again there is the implication for schooling that some children may learn better when there are opportunities for moving around many locations (ecologies, settings, areas, as in open classrooms) and that others prefer to restrict the range of their setting differentiated activities. At least we see that children introduced this difference in their own spontaneous work.

Styles not significant on this analysis but perhaps worthy of further attention were: (e) interior versus exterior locations; (f) preference for master shots; and (g) close versus far distances.

E. A Preference for Interior Versus Exterior Locations

While this is a style variable, there are interactions also with age and sex. Male beginners tend to prefer outdoors, while female learners tend to prefer indoors.

But with experience and number of films, the males tend to go indoors and the females go outdoors, evidencing the familiar tendency for successful artists to show cross sex characteristics. Work indoors is also more difficult and increases with age. This is therefore a complex variable in which age and sex effects have to be disentangled so that the character of the original idiosyncratic preference can also be highlighted.

It is too early yet to know whether this factor has anything to do with the very clear child preferences for indoor and outdoor activities in schooling, but that such preferences exist is common knowledge to anyone of teaching experience. That some children learn more easily when the activity is placed out of doors (as compared with indoors) is an intriguing implication.

F. A Preference for Master Shots

A film maker who uses master shots prefers to move from a more global representation of his subject before he moves to a more limited frame where the action is taking place. That is, he or she gives you a view of the whole street, perhaps with the characters walking towards you, then the character, then some action with the character. This looks like the kind of holistic concern with contour versus analytic focus on details introduced by Zelniker and Jeffrey (1976), though criticized by Kagan (1976), except that in the present case our master shot maker is both holistic and analytic by turns, whereas the opposite kind of film maker goes right to the immediate action without any such overview. That such a global-analytic distinction is present, however, is supported by one of our own factors in which master shots loads at one end and inserts (a highly analytic process) loads at the other.

G. Close Versus Far Distances

Here again we might expect a relationship to interpersonal proxemic kinds of variables. There is a literature showing that some persons are more comfortable at larger distances from others, while others prefer closer contact (Holley, 1972), although this literature is related to field independence measurements which are already covarying with the children here being studied. Apparently, even though the volunteers for this study selected themselves in a way that would permit considerable progress in field independence, they were still able to vary on "distance" preferences.

Conclusions

In attempting to arrive at some overall assessment of the major influences on learning through films as measured by technical competence,in this chapter we have sought to compare the relative influence (as judged by the production of statistically significant effects) of each of our major classes of independent variables. In the variety of possible comparisons that can be made, in general experience (the difference between the films made early and late) seems to have a stronger effect on technique than does age, which in turn has a stronger effect than sex, which in turn is greater than the effect of being a kind of film maker (one versus many films). This finding gives greater support to a learning interpretation (like that proposed by Griffin) than to a fixed cognition kind of interpretation which might follow from Piaget (if indeed age can be taken as a register of the latter). But the differences are not great, as the comparisons in Table 48 indicate.

Table 48

Number of Significant Effects in Comparisons

of Classes of Independent Variables

Experience	Age	Sex	Maker
82	71		
44	33	23	
	29	18	17

In general, in this skewed workshop sample boys learn more. There are more findings for males who are film makers, and there are more differences for the male groups by age and by experience than for the female groups. Considering the differences in volunteering and numbers described in the workshop chapter, this is not a surprising sex difference. The wisest conslusion is probably that only the data for the males should be considered with some seriousness.

CHAPTER XII

PSYCHOLOGICAL MEASURES

As soon as possible after their first arrival at the workshop (prior to the inception of the project at the elementary school) new students were given a battery of tests. Completion of the testing was a prerequisite for further participation in the program for most students. Those cases where parents objected to testing were exempted from this requirement. Testing was usually done in a room at the workshop on the second day of attendance after the child returned forms giving parental permission for psychological testing and for the use of the child's products by the research project and by Young Filmakers. The first day usually involved only an introduction to the workshop and film viewing. Testing was done by the author or by graduate research assistants working under his supervision.

Tests were selected or developed on the basis of a preliminary analysis of the film making process. The makeup of the battery changed over time, with some tests dropped and others added, as we had experience with the tests and as we evaluated preliminary results. Because film making seemed to involve a number of areas of psychological functioning, tests covered a variety of psychological constructs. In addition, background information on family structure, socioeconomic status, academic status, previous experience with film making, and film and television watching habits was gathered in an interview.

We attempted to assess two cognitive style variables through the use of Witkin's Embedded Figures Test (EFT) and the Articulation of the Body (ABC) scale to measure field independence, and by measuring divergent thinking with the Torrance Test of

Creative Thinking (TTCT). Both of these yielded interesting and significant results. Cognitive abilities were assessed with the performance and vocabulary subtests of the WISC, with the Harris-Goodenough scoring (H-GS) of the Draw-a-Man test, and with eight measures of Spoken Language Facility (SLF) developed by the author.

The SLF measures were scored from tape-recorded interviews based on the Van den Daele Ego Ideal Interview (EI), which have been scored independently for level of ego involvement. Other measures of personality-related variables included scales developed by Nowicki and Strickland for measuring internal versus external locus of control (LoC) and questions concerning the child's preferences in film and television programming.

A total of 66 and 63 children were administered the WISC performance subtests and the EFT, respectively. The other tests were administered to smaller subgroups, numbering between 30 and 50, excepting the FMT, which was completed by only 14 naive subjects. Figure 14 presents the individual test data form and indicates all measures used at some time during the project (see page 357).

Four to six months after the initial testing attempts were made to retest each subject, whether or not he had continued to attend the workshop. Post-testing was required of those who wished to continue in the workshop program. Those no longer participating were offered and paid through dolls for completing the post-test battery. A total of 33 children received at least partial retesting at the four to six month interval. At the end of the second year we attempted to retest all those tested during the first year. Sixteen subjects were thus retested at an interval of 16 to 18 months. Fourteen of these had also been tested at the four to six month interval. Six of these children had continued to be involved in film making on at least an irregular basis over the entire period.

Many differences which are statistically significant have emerged. Not surprisingly, groups differed in initial scores in several ways. They differed along

Name ____________________ DOB _____ Age _____ Sex _____ Sib. Stat. _____________

Grade _____ School _______________ School Standing _____ Time in Film Program ___

WISC

	Pre-test	Post-test	Change
Verbal			
Information			
Comprehension			
Arithmetic			
Similarities			
Vocabulary			
Digit Span			
Performance			
Picture Completion			
Picture Arrangement			
Block Design			
Object Assembly			
Mazes			

Embedded Figures Test

Adult: Pre-test (Form _____) __________ Standardized __________
Post-test (Form _____) __________ Standardized __________

Children's: Pre-test __________ Standardized __________
Post-test __________ Standardized __________

Draw-a-Man Test (Harris-Goodenough Quality Scale)

		Scale Score	Percentile Rank
	Man		
Pre-test:	Woman		
	Average		
	Man		
Post-test:	Woman		
	Average		

Torrance Tests of Creative Thinking

	Scale Score	Percentile Rank
Verbal		
Fluency		
Flexibility		
Originality		
Figural		
Fluency		
Flexibility		
Originality		
Elaboration		

IPAT CPQ

Factor	Sten
A	
B	
C	
D	
E	
F	
G	
H	
I	
J	
N	
O	
Q3	
Q4	

Nowicki-Strickland Scale of Internal-External Control

Pre-school-Primary _____ High School _____

Fig. 14. Individual Testing Data Form.

racial/ethnic lines (unfortunately these are partially confounded by socioeconomic differences); there are sexual differences (girls generally scoring higher); there are differences between those who continue to participate over the four month period and those who do not; and there are differences between those who were retested and those who refused to be or could not be reached.

Pre-, post-test change comparisons were made between continuing and drop-out groups on many but not all of the tests. The most significant changes are on the EFT scores with continuers shifting toward greater field independence an average of 3/4 of a standard deviation and the drop-outs showing essentially no change. There is a sex difference here, however. Girls show a shift of this sort after only limited experience, while boys show it only after participating a full four months.

Other significant differences appear in WISC Picture Arrangement subtest scores over the 16 month interval, but not the 4 month interval. Locus of control change scores are significantly different over both 4 month and one year intervals due primarily to a shift toward a more external orientation by drop-outs. Positive shifts are shown by those with more film experience based on partial data for scores on the EI scale, and on some of the SLF measures and on the film making vocabulary measure.

The following Table 49 presents the basic test data for the total sample and for each of the racial/ethnic groups and for males and females. The subsequent Table 50 presents the same data broken down by drop-outs, by children with no experience and children who were film makers.

Results

Despite all the difficulties of testing cited above, which mean that the number of subjects on whom our generalizations are based is quite small, we believe we are able to support the following propositions.

1. Those volunteers who came to film making and stayed in it were different from those who dropped out. These children began by being superior on the WISC task

Table 49

Pre-Test Data for Psychological Measures for Total Sample, and by Sex and Racial/Ethnic Group

(Years Combined)

	WISC							Draw-a-Man (Points)				EFT	I-E	Torrance (Figural)			
	Vocab	Pict Comp	Pict Arrg	Block Des	Obj Assem	Mazes	Perf IQ	Man	Woman	Self	Self-Man D	Adult	Stand	Flu	Flex	Orig	Elab
N	40	66	66	66	43	43	66	41				63		34			
X	10.45	12.11	10.49	11.38	11.74	10.30	108.12										
SD	2.98	2.65	3.07	2.92	2.87	2.51	14.67										
								Males									
N	27						51					47					
X	10.07						106.49					93.05					
SD	3.14																
								Females									
N	13							15				16					
X	11.23							113.67				102.61					
SD	2.56																
								Puerto Rican									
N	20	36	36	36	19	19	36	18		17	17	34	23	15	15	15	15
X	9.20	11.69	10.14	11.22	11.42	10.21	107.00	106.50		104.47	-2.29	86.95	97.65	97.53	93.60	93.73	99.93
SD	2.44	2.94	2.94	2.92	3.45	2.86	14.84	12.52		11.84	5.62	19.64	14.29	17.71	14.35	29.24	11.82
								Puerto Rican Males									
N	15	30	30	30	18	18	30	17		16	16	27	18	15	15	15	15
X	9.07	11.60	9.80	11.10	11.50	10.11	105.53	107.71		105.53	-2.50	86.47	96.83	97.53	93.60	93.73	99.33
SD	2.79	3.08	2.78	3.03	3.54	2.91	15.18	11.78		11.31	5.74	20.88	15.36	17.71	14.35	29.24	11.82

Table 49 (cont'd)

	WISC							Draw-a-Man (Points)				EFT	I-E	Torrance (Figural)			
	Vocab	Pict Comp	Pict Arrg	Block Des	Obj Assem	Mazes	Perf IQ	Man	Woman	Self	Self-Man D	Adult	Stand	Flu	Flex	Orig	Elab
								Puerto Rican Females									
N	5	6	6	6	1	1	6	1	1	1	1	7	5	0	0	0	0
X̄	9.60	12.17	11.83	11.83	10.00	12.00	114.33	86.00	74.00	87.00	+1.00	88.80	100.59				
SD	0.89	2.23	3.37	2.40			11.26					15.03	16.40				
								Black									
N	6	11	11	11	5	5	11	5		5	5	10	10	4	4	4	4
X̄	8.67	11.55	9.00	9.36	9.60	8.60	98.00	104.40		106.20	+1.80	93.12	87.31	86.25	82.00	76.25	83.75
SD	0.52	1.64	2.45	2.06	1.52	2.07	10.77	10.48		6.06	10.85	15.80	12.40	13.96	10.68	9.18	7.63
								Black Males									
N	4	8	8	8	4	4	8	4		4	4	7	9	4	4	4	4
X̄	8.75	11.75	8.38	9.25	9.00	7.75	95.38	107.00		107.00	0.00	91.87	88.56	86.25	82.00	76.25	83.75
SD	0.50	1.67	2.56	2.32	0.82	0.96	11.66	10.07		6.83	11.63	17.90	12.47	13.96	10.68	9.18	7.63
								Black Females									
N	2	3	3	3	1	1	3	1	1	1	1	3	1	0	0	0	0
X̄	85.00	11.00	10.67	9.67	12.00	12.00	105.00	94.00	93.00	103.00	+9.00	96.03	76.08				
SD	0.71	1.73	1.16	1.53			1.73					12.00					
								Chinese									
N	2	3	3	3	3	3	3	3		3	3	3	2	2	2	2	2
X̄	11.50	13.33	12.00	14.67	12.33	10.00	117.33	116.00		118.33	2.33	114.67	128.33	113.00	112.50	116.00	117.50
SD	0.71	3.22	0.00	1.53	0.58	1.73	4.51	3.61		9.71	7.02	13.60	7.31	18.39	17.68	32.53	13.44

Table 49 (cont'd)

	WISC							Draw-a-Man (Points)				EFT	I-E	Torrance (Figural)			
	Vocab	Pict Comp	Pict Arrg	Block Des	Obj Assem	Mazes	Perf IQ	Man	Woman	Self	Self-Man D	Adult	Stand	Flu	Flex	Orig	Elab
								White									
N	12	16	16	16	16	16	16					16		13	13	13	13
X̄	13.25	13.19	12.00	12.50	12.69	11.63	115.88					111.12		104.00	104.77	104.54	120.54
SD	2.77	2.23	3.43	2.73	2.33	1.75	13.38					21.60		19.59	21.88	23.77	35.51
								White Males									
N	6	10	10	10	10	10	10					10		7	7	7	7
X̄	13.00	13.50	11.40	13.00	12.10	10.70	115.00					105.19		92.29	93.86	102.57	119.71
SD	3.69	2.68	3.41	3.37	2.64	2.50	15.58					24.79		13.95	13.35	24.28	46.12
								White Females									
N	6	6	6	6	6	6	6					6		6	6	6	6
X̄	13.50	12.67	13.00	11.67	13.67	11.50	117.33					122.00		117.67	117.50	106.83	121.50
SD	1.76	1.21	3.52	0.82	1.37	1.64	9.79					7.80		16.48	23.97	25.[illegible]	21.74

Table 50

Pre-Test Data for Psychological Measures by Drop-Outs, Experience and Film Maker Status

(Years Combined)

	WISC							Draw-a-Man (Points)				EFT	E-I	Torrance (Figural)			
	Vocab	Pict Comp	Pict Arrg	Block Des	Obj Assem	Mazes	Perf IQ	Man	Women	Self	Self-Man D	Adult	Stand	Flu	Flex	Orig	Elab
Drop-Outs																	
N	25	38	38	38	23	23	38					37		17	17	17	17
X̄	10.44	11.74	10.50	11.40	11.57	10.57	107.42					93.57		107.77	107.65	106.88	113.77
SD	3.38	2.71	2.83	2.81	3.07	2.45	14.12							20.11	20.07	22.51	27.04
Male Drop-Outs																	
N	16	27	27	27	17	17	27					26		13	13	13	
X̄	10.06	11.70	10.15	11.59	11.12	10.29	106.07					90.44		102.69	101.31	105.00	
SD	3.75	3.05	2.61	3.21	3.30	2.73	15.42							19.32	15.77	21.50	
Female Drop-Outs																	
N	9	11	11	11	6	6	11					11		4	4	4	4
X̄	11.11	11.82	11.36	10.91	12.83	11.33	110.73					100.97		124.25	128.25	113.00	122.25
SD	2.67	1.72	3.26	1.45	2.04	1.21	10.13							13.82	20.35	28.08	27.98
No Experience																	
N	7	8	8	8	2	2	8					7					
X̄	9.14	11.25	11.13	11.63	9.50	10.00	102.63					93.42					
SD	1.46	1.28	4.19	4.63	3.54	1.41	16.72					20.08					
Male No Experience																	
N	6	7	7	7	2	2	7					5					
X̄	9.17	11.29	10.86	11.00	9.50	10.00	99.14					95.30					
SD	1.60	1.38	4.14	4.62	3.54	1.41	14.60					23.30					

Table 50 (cont'd)

	WISC							Draw-a-Man (Points)				EFT	E-I	Torrance (Figural)			
	Vocab	Pict Comp	Pict Arrg	Block Des	Obj Assem	Mazes	Perf IQ	Man	Woman	Self	Self-Man D	Adult	Stand	Flu	Flex	Orig	Elab
Film Makers																	
N	8	20	20	20	18	18	20					19		16	16	16	16
X̄	11.63	13.15	10.20	11.25	12.22	10.00	109.35					99.63		90.88	86.81	93.25	99.63
SD	2.26	2.72	3.14	2.43	2.56	2.74	13.82							12.87	10.27	20.33	25.31
Male Film Makers																	
N	5	17	17	17	16	16	17					16		14	14	14	14
X̄	11.20	13.06	9.59	11.24	12.06	9.69	107.47					96.21		88.93	85.50	93.07	96.71
SD	2.28	2.90	2.96	2.61	2.67	2.70	14.19							11.76	9.39	21.18	25.80
Female Film Makers																	
N	3	3	3	3	2	2	3					3		2	2	2	2
X̄	12.33	13.67	13.67	11.33	13.50	12.50	120.00					117.87		104.50	96.00	94.50	120.00
SD	2.52	1.53	1.53	1.16	0.71	2.12	2.00							16.26	15.56	19.09	2.83

of picture completion, object assembly and total performance IQ. This implies to us that they were of higher concentration and cognitive application than the drop-outs. The picture completion involves the careful analysis of visual forms and the object assembly requires task persistence. However, our graduates were lower (any differences introduced here are statistically significant) than the drop-outs in their scores on creative thinking. That is, although they could focus in on a task, they were not as good at freely associating to a novel stimulus in a labile manner. We suspect that they were better organized but of narrower focus than the drop-outs. The latter might well have found the narrow and disciplined concentration of the tasks in film making too difficult and too restrictive of their broader but perhaps shallower range approach to reality.

2. The longer the children stayed in the film making workshop the more adequate became their analytic skills, in particular as shown by their scores on the embedded figures test. This is a measure which is usually quite resistant to change but in this experiment shifted markedly. Field independence is regarded as a cognitive style of wide characterological implication. The possessor is more analytic in perceptual and cognitive forms and more autonomous socially than the field dependent person. The drop-outs' scores on this variable did not change over the same period of time. In a final report these change scores will be graphed against the norms for age changes with children at this age level. Children who stayed beyond the first year also showed changes in the WISC picture arrangement scores. This task, very much like those in editing, requires the subject to arrange a panel of cartoons in the correct order. To do this the subject must notice small details and correspondences from one panel to the next. An improvement here is an improvement in seriational and organizational ability.

Conclusion

Our volunteers were, in general, above average in competence. Those who remained in the project showed a substantial improvement on some cognitive and some characterological measures. Considering the hundreds of hours of diligent activity that was involved, this should not be surprising. But it is a finding that has often been claimed for highly motivating activity in the arts, but seldom so clearly demonstrated.

CHAPTER XIII

CHILDREN'S REACTIONS TO FILM MAKING

Children coming to the workshop were interviewed before they began film making and after it was all over. Many exploratory questions were included in both interviews. We have chosen here, however, to report only the post interviews of the most successful children as judged by the number of films that they finally made. Our rationale here is that these were the children with a history of success so that their reports on the nature of the film making experience should be biased in favorable directions. The questions have mainly to do with their preferences in film making and with their own films. In some cases when the interview is taken they have finished making films; in others they are still in progress. Using the criterion of at least three successful films, we have post interviews with eight boys and one girl.

In many ways their descriptions provide the best commentary on who they were and what it was like to make films at the workshop.

George N (10 films; 14 years) Interviewer: Frank Eadie

Q: You've been coming to the workshop almost a year haven't you? Do you remember when you first came? Do you remember when that was?

A: Two weeks after this place first opened. I came around the 26th of October.

Q: So it's better than a year now. In that time how many films have you made?

A: Wow, including the exercies and everything . . .

Q: Can you name them? Can you think about them?

A: Oh, yes, the first film I did was an animation. It was a film about the lady and the tiger. Then there's stop before starting, and then there's the business sketch. Yes, just a small exercise. It's just the smallest thing. It's just about someone who's working and then he goes to sleep and then he gets up and goes to work again. You know, real fast you know.

Q: A stop action? Is it still around?

A: Yeah, it's in . . . up there. And then I did a . . . Life as a Hooker. And Take to the Altar and Run, which I have to cut in half. And then I'm working on Nationalist Day.

Q: Have you finished the last one, Take to the Altar and Run?

A: See, my cousin, she had the leading role, and she lives uptown, and she had trouble getting down, to get her to come down one more time.

Q: Are there still one or two scenes to do?

A: Yeah, one scene.

Q: Oh, that's too bad. And now your're doing Nationalist Day? You also worked on one that . . ., didn't you?

A: Yeah, that was the Six Thousand Dollar Phone Call.

Q: What part did you do in that?

A: I just edited it, and wrote the script.

Q: Was there ever sound put on that?

A: No.

Q: Have you worked on any others? You've worked on a lot of films, haven't you? How many films have you acted in?

A: Well, let me see. The first one I acted in was A Friend Indeed. And then The Wrong Way to Make a Movie with Eddie W and David L, a couple of films that never were shown. And I worked in The Bombs and The Blackbird, and 007. That was Eddie W's.

Q: Eddie W's, really? I thought it was David's.

A: Yes, that was David's. And then I worked in Mr. Pickle.

Q: The Deadly Pickle?

A: Yeah, The Deadly Pickle. What else did I do. That's all I can think of.

Q: Are there any others that you started that you didn't finish?

A: No, just Take the Altar and Run. That's the one I didn't finish and it was supposed to be one of the best films around here.

Q: Yes, the shots that I've seem of it are good. Are there any other films that you started writing the script for, or thought about writing?

A: Yeah, I have already, The . . . School Hours. I'm writing up the script. It's supposed to be some sort of a love story. And they don't seem satisfied with the script so I rewrote it four times already.

Q: But in the past year you didn't write up any that you never made?

A: Everything I wrote I made.

Q: Can you tell me, sort of describe what a film maker does when making a movie?

A: Well, first of all he creates something in his mind that he wants to be done or shown.

Q: Can you tell anything about how he would do that? Say for Nationalist Day? Where did the idea for Nationalist Day come from?

A: Well, it was part of a dream I had. You know, there's nothing like it, but it was about the bombing of a building.

Q: Any particular building?

A: No, just a building. And so I just did the same thing. That it would be a film about the bombing of a building. So it just got a little story put in front of it, and then comes the bombing of the building. And Take to the Altar and Run, I got the idea of that, I always think of things like any kind of story, I make something out of it. Like I was walking round the Bowery and I was thinking of a story and I started putting things together. And so I just started walking around the Bowery and stuff like that and writing down little things, and so I got a whole script together.

Q: When you're writing down, what kinds of things do you write down?

A: Well, there were two or three other parts. She was supposed to be from Puerto Rico. As a kid she was poor and she wound up poor in New York, and she was always thinking about going back home by having money. And I would go out to the Bowery and walk around and other things would pop into my head. Like at the end of the story she's supposed to return back home, but I had problems. I had to cut it and it ends with her having money and being wealthy. And Stop Before Starting was just like a fast idea, because when I was first here I didn't have much work because I was working on Jose's movie, so they asked me to write up the script. So I was thinking, it just popped into my head and I just wrote it down.

Q: You were trying to think of a different idea for a script for quite a while before you actually thought of it? Then the whole thing could have come to you at one time?

A: Yeah, it did. I have no problems with it.

Q: Do you remember how it started? Or was there anything in particular that triggered that off?

A: Well, it just started with a guy and a girl walking. It started at the beginning, and after that it just started to be parts together. But instead of the brother stabbing him, he was supposed to shoot him, shoot the boyfriend, but it changed. Because them two are young and it wouldn't seem right to that story.

Q: To have guns?

A: Uh huh.

Q: So we're talking about Stopping Before Starting, right, and how you got the idea for that. It just sort of came all in one time, right?

A: Yup. In one weekend.

Q: Okay. What else do you have to do in the making of a film?

A: You have to get your actors organized, the scenery and everything, and the shooting script and the shots.

Q: Anything else?

A: Well, you have to make up lines, get the lines and everything what you want, dialogue.

Q: Than what?

A: Then you organize the actors together and you set up a date when you're going to shoot. Then you set up everything and then you start to shoot. Like someone will come in and you will change the angle and check the light and everything.

Q: Anything else?

A: Then you shoot.

Q: Then what?

A: Then you send it in to get printed and they develop it, and when it comes back you edit. You splice. You take out parts and you put in parts before.

Q: You what?

A: You take out parts and you put them in a different sequence or something, and you splice it and you send it up for a sound stripe, and that's when you record the dialogue over it, and then you have a film.

Q: Mmmm. That's pretty accurate, pretty complete. What kind of film making, writing, editing or making shot lists did you like most?

A: Well, I like most the acting. But I didn't do too much acting in my own films, so I like most the shooting and the directing and you tell them, "Do this" and "Do that"! "I want it that way!"

Q: Why do you like acting?

A: Because I like to act.

Q: What is it about acting that you like?

A: Well, I like to create roles and try things that I've never done before and experience something that you're not, but you can feel that what's happening.

like I can feel like acting like a clown and you have to act funny, or you are going to act like a father or a dog, and you have to have a certain feeling like acting like a dog.

Q: So you like experiencing acting like these different things. Anything else?

A: Well, I enjoy seeing people laugh.

Q: You mean when they see the film?

A: Or just to criticize. Like they'll say, "Oh, he's no good," or something like that.

Q: You enjoy the people watching you act and their coming. What part of film making do you like least?

A: Well, for me, the editing. Like I always have problems with the editing. Like I'll leave a shot too short or it's too long, or, you know, it's confusing.

Q: Why do you find it confusing, in particular?

A: Well, you've got to take a shot, right, like there's a mistake or something, like he looked at the camera, and I want to cut it right before he does look at the camera, and you can get a frame in or something, or you leave out an extra frame.

Q: You don't like to take the time to do it carefully?

A: Right. I finally get to do it carefully by the time I do it three or four times.

Q: You just made live films, right?

A: Uh huh.

Q: You didn't make any animations?

A: Yeah, I made one, the first one.

Q: Why did you make that one?

A: I had to use the camera. I never did animations before.

Q: Did the teacher want you to do that or did you do that on your own?

A: Well, they wanted me to do that, but, and I wanted to do it too, but they told me it was radically different. I didn't have to have any scripts.

Q: Why have you generally made live films?

A: Because I like the films that have action even though some animations could have action. I like to see more . . . you know, when you see a film that's like you're seeing something or thinking of something, that's when I like to see it. See different kinds of things you don't normally see with people and stuff like that.

Q: Of course, you could do that with an animation, too, couldn't you?

A: Uh huh, but every picture, for me that's like a still because you can take a shot with your eyes closed and for me that's like with your eyes closed and you take a shot of them with the shots and you get to have motion and movement. You know, something with significance or something. Like you could have a little box and say it's a bomb, or I could say I have money in here. It's not really there, but you create it with your mind.

Q: And you can't do that with animation?

A: You could do the same thing with animation, but with animation, well, I don't like the clicking with animation.

Q: What is it about that that you don't like?

A: Well, you see you have to move the things in a certain position and you have to click it a couple of times and you move it a little more and you click it a couple of times.

Q: Why do you dislike that?

A: To me it's tiring just to be clicking all the time and to be looking through all the time and seeing it and keep on moving it and moving it, and it's not as much directful to me, like with the actors it's a little more harder for me because you have the people. They're not like something, like a piece of paper that you push that way and it stays that way. You know, you have to force them to do it that way, the way you want it. It's much more challenging.

Q: Do you like to watch films in general?

A: Uh huh, a lot. I like to stay up and watch them. Before school starts I can stay up til three or four in the morning.

Q: Which of the films that you worked on did you like the most?

A: The film that I worked on that I like the most was Take the Altar and Run, but I haven't finished it, that's all.

Q: What did you especially like about that?

A: Well, Take to the Altar and Run was like you can see it from an advantage of an average person, a person with money. You can see the steps like she is dressed in raggedy clothes, then she's in a little better clothes and better clothes. And the scenery, and the fact that I was going to have cars and everything, 'cause you know I have two cars and no movie round here uses cars with actors using inside the car, so that's why I like that one. I was going to have a little night club . . .

. . . that thing costs ten dollars to make.

Q: A jail?

A: Yeah, that jail out there in the other room, it cost ten dollars, all them wood.

Q: Did you ever film that scene?

A: No, that's the last scene so I can end off the movie. And then I shot in a department store, which was a hard thing to do because you're not allowed to shoot in a department store. So we had to sneak in and she was wearing . . . she was supposed to be shop lifting, that's why we have . . . you know, she was supposed to look suspicious.

Q: Supposing someone picked her up?

A: Yeah, then they would pick me up and then I would get in trouble. She walked in with that raggedy dress and a coat and she walked out with a pair of blue pants and a light shirt and the cops came out after her.

Q: Did they really?

A: He looked, she came out and he came out looking after her.

Q: Did you include that in the film?

A: I couldn't because I had to keep the camera on her.

Q: Did he finally catch up with her, or what happened?

A: No, he walked right back in.

Q: Did she carry the stuff in in a bag?

A: Yes, she had a shopping bag and I told her to look suspicious.

Q: How many different sections are there in the film?

A: Well, to round off, to divide it, it's three.

Q: Three scenes?

A: Not scenes. There's a lot of scenes. Each section has two or three scenes.

Q: Okay. What are the major sections, then?

A: Well, the first one is when she's a bum and the second one when she meets her first fiance and the third one when she meets her second fiance. It's just divided.

Q: Then the third fiance is when she got rich.

A: That's why it was easy for me to just cut it off there, stop the movie, 'cause you see, it was divided perfectly. All I had to do was to change the name.

Q: I don't understand.

A: Right from when she was a bum til she goes to jail, all that is just one sequence. Like she was a bum, she goes into the department store, she gets caught and she gets sent to jail. That's a whole story. She comes out of jail and she meets a guy. She has a small romance with him, she leaves him. That's another story. And then she meets another guy and he's a hit man and she doesn't want to have a life of a hit man, so she leaves him. And there's three stories right there in one. So that's why it was easy for me to cut.

Q: I don't understand. The last part is the part that you haven't filmed yet, is that right?

A: That's the jail scene.

Q: Oh, it's the jail scene that you haven't shown yet?

A: Yes, that'll finish it off.

Q: Oh, I see. What happens at the end? She just leaves the second guy?

A: She just leaves everything. She just walks back on the Bowery, but with money she's got, like the bums ask for money. She gives them money and she's just dancing around the Bowery.

Q: Can you describe how many scenes there are?

A: Well, what do you want me . . .

Q: Well, what is a scene first?

A: It's part of a story that takes like the same part of the story that's in a different place or in a different sequence. Like you can have just this one room. Like the first day there'll be like someone doing something and all the attention is at that person doing something, and then that's just finished. And then someone else starts doing something and then all the attention starts going at that person doing something and that divides it. It's in one room, but the attention divides both places. That's what I think is a scene.

Q: Is it two separate scenes or just one scene?

A: It's one scene, you know.

Q: As long as it's in the same place it's the same scene?

A: It can be in different places, but what I'm trying to get at is that it's just like a small section of another section.

Q: I can see that, but how can you tell when a scene starts and another ends? How would you divide them up?

A: You can divide them up, like let's say someone is in the house, right? So he walks out, he goes to the store, so that there's one scene, and he goes to sleep. Let's say he gets up in the morning, he goes, takes a walk, he buys something, goes back to the house, goes to sleep. Right there is the whole scene. You can't have him sleeping, which he could, you can't have him sleeping right there, he's not doing nothing. And so then he just starts all over again. He could start all over again in a different way. He could get up, just go ride a bicycle and not come back home. It's a story, but it's just divided.

This thing happened like this way. It's the same person and everything. It happens this way. You can see him sleeping, wakes up and he just does something different. You know, one person, you know, do two different things.

Q: What would it take to have a new scene then?

A: You can have anything that is different. I could be in this chair talking with you now and like we turn off the tape, that's finished right? You get an idea that something's finished because you've turned off the tape. So then we can come back the next week and there'll be like something in between and we could be eating here. That's two different things, but it's still the same thing because we're both together, because we are recording here and at a different time we eat. It separates.

Q: You said that would still be the same scene?

A: Uh uh.

Q: What would have to happen for it to be a new scene?

A: Well, instead of me and you, you could just have me doing something that I would normally do. Like I could be taking a walk or something. That would be different completely from this. That would make it an entirely whole different scene.

Q: Because I'm not there? Is that why?

A: Yeah, because you are with me, and then there's that splicing between or whatever and then it's just me alone. That's a whole entire scene right there. Like I could go to the store, come back and read some books, and you can go and record some more tapes. That's three different scenss right there.

Q: You're saying if the characters change, that's a new scene, right? Is there any other way that you could have a new scene?

A: Yeah, you can have one character and he's just walking with a bag, and he gives the bag to somebody else and that person goes walking someplace else, and the bag gets lost somewhere and so someone else finds it, and that's a whole entire different other thing you can do like that.

Q: Would that be a different scene?

A: That would be three scenes. There's a guy walking with a bag and he gives it to another person and you don't see that guy any more. There's this little part, and so then you see this other person, different, and he loses the bag, and somebody finds the bag and you show the person doing whatever he does with the bag. See, that's a different scene. Or what you do, too, is the first person with the bag and the second person with the bag, the second person with the bag go back to the first person with the bag, and there's a different scene, too, right there together.

Q: The next question says, can a movie be divided up into parts that are different from scenes?

A: It could be done like that animations. They're not really scenes, but they could be like scenes that's really like more for animations, because it's just different parts.

Q: How do you mean?

A: You have things going by, you have things standing still or up and down, and that divides everything.

Q: What kind of motion you have? You talked about sections earlier, of your film. You had three sections?

A: Uh uh. You see, that's divided up into storywise. In the story there's different other parts like different scenes. The first section starts with her just walking and looking around through garbage and then she goes to sleep. And then the second scene is when she wakes up the next day and goes to the department store and she gets caught. She's talking and they put her in jail and she goes to sleep there, and it goes into the next scene. Like the first scene is the raggedy dress scene, you know, the first section was divided into three scenes, so that's where it shows her in jail, and that enters into a whole different section and the first scene she's out of jail when she meets the first guy, and the first guy takes her someplace. That right there is a whole new scene, part.

Q: How many scenes are there there in the second part?

A: Yeah, there's where she meets him, and there's where she's getting dressed, and then there's the party, you know, the night club where he's driving her in a car. He was supposed to be taking her to her house, you know. She has given him a false address, so he wouldn't ask what kind of a woman she was or something. And then there's a scene, he asks her to go out. She wants to go out to dinner or something. A whole other scene right there. And there's a whole other part where he asks her to get married with him. Right there there's a whole entire scene. And I don't know how she leaves him. Oh, she just leaves. She has the ring and everything, and she just takes off the ring and just takes the bus or a train out of town. Then when she goes out of town, she goes into the hotel. That section is finished and then it starts with the last section. That's when she goes to the hotel. She's in a nice hotel and then she goes down to a party in the hotel. That's where she meets the hit man, and right there that's one scene. And then her and the hit man go, and the hit man goes to her apartment, to his apartment. So right there there's a scene. So he starts to go to shoot up a couple of people. That's another scene. That scene, it's a part of a sequence, part of that scene where she is thinking what would she be like if she marries this guy. More like Bonnie and Clyde, that's her thinking. That's just the special effect part of that scene. And the same thing happens again, but this time she takes the man's money and then she leaves. That's the finishing scene when she is walking up and down the street.

Q: That's a complicated film.

David M (11 films; 12 years) Interviewer: Frank Eadie

. . .

Q: Have you stopped coming to the workshop?

A: Yes. It was because of my friends. They said, "You like this place? It's real silly." So I said I don't want to come no more. But I came still. They think it's silly because they want to do a movie real fast. But I tell them they should write a script, but they say I'm tired of that. But it's work and you can't do it just like that.

Q: Have you had any trouble with film making? With editing or splicing?

A: At the beginning I found it all hard. I made bad splices and didn't know what a script was. But now I know all about it. As time went by it got easier.

Q: What part of film making do you like the best?

A: I like shooting the best. I feel wonderful and happy once a film is over. You don't have to worry about it any more. You don't have to come any more.

Q: Is it worth it?

A: The harder it is the better it is.

Q: Which part did you like the least?

A: I like writing the script the least. My hand gets tired. At home I go over it and revise it.

Q: Did you make live films or animations?

A: I made one live and one animation. I like live because it's you that is moving, not the pictures. When you do animations, it's hard. You have to draw a whole bunch of pictures, one at a time, and it's hard. You have to draw a whole bunch of pictures, a thousand sheets if you want to make a long movie.

Q: Which came out better?

A: Animations. I like animations because they are interesting to little kids. They are like cartoons, pictures to move. My animation got messed up. It was just triangles moving back and forwards. That's all the equipment I had.

. . .

Q: Which of the films that you have worked on did you like the most?

A: I liked the Detective the most because it was action, had some sad parts, fighting scenes, hospital scenes, shooting scenes. It was better because the name of it was Detective and what the man does, how he gets along with people, except two guys didn't get along with him. Twin Magic was made for magic and the Detective was made for action. What was in the Detective was better and the scenes were better. But the magic parts of Twin Magic, the scenes were better than the Detective. I like both of them. Technically the Detective was worst because I started in color, then I forgot and shot it in black and white. What I'm thinking to do is start that scene all over and shoot it in black and white so it will all be black and white. It's only a little piece.

Q: But it's these little details, these little technical details, that's what makes a film good or bad? Details such as script writing, editing and lighting and sound? So, which movie would you say was the best, where all the details were just right?

A: Twin Magic. In Twin Magic all the details were right, right lighting.

. . .

Danny D (11 films; 12 years) Interviewer: L. Nelick

. . .

Q: You're still coming to the workshop, right? Did you have any special trouble with any part of film making, like editing, shooting or writing scripts?

A: No.

Q: What part of film making, editing, writing, shot lists or shooting, did you like most?

A: Shooting. It's fun.

Q: What's fun about shooting?

A: Doing it.

Q: Just doing it? Like looking through the camera and shooting it, even if it's animation? You like that?

A: Yes.

Q: What part do you like the least?

A: No part I like the least.

Q: So you really like film making, right?

A: Yes.

Q: Anything you don't like to do? You like making the shot lists?

A: Yeah.

Q: You made live films and animations, right?

A: Yeah.

Q: Why did you make both?

A: I was going to go with live films, then animation, then live, then animation, like that.

Q: A variety. So how many films have you made?

A: I like finding out how to make them, how it moves.

Q: How many films did you make?

A: I don't remember. It seems a lot.

Q: I remember the one about the skeleton.

A: The one about with knight (?)?

Q: Oh, yeah, with the clay. What was that called?

A: The Masters, (?).

Q: Did you ever finish that?

A: It got messed up because we kept on taking the film out of the camera 'cause we had to and we exposed the film. And so I kept on exposing it without knowing it. And when we developed it we saw all these white spots and we said, "oh, shit, what happened to the film?"

Q: Were there any other films that you started?

A: I don't remember them. It was a long time ago.

. . .

Q: . . . Which of the films that you worked on did you like the most?

A: The one that I was working on before. This was on the Brooklyn Bridge. And that was all right. I liked filming that.

Q: That was about (?)? Paul's film?

A: That was about thieves, some sort of thieves, and they had a briefcase. And they met on the bridge. There was a scene on the bridge, and they met on the bridge. And they passed it to Paul and Paul left. (?) And the last scene was the camera facing up and going towards the sun. And there was a sort of explosion at the end.

Q: You liked that better than making your own film?

A: I liked making them a little. I liked getting into it, but this thing with doing the script, it's kind of hard. It was all right, you know, someone telling you, "do this, do this."

Q: What was there especially about that film that you liked?

A: I liked it, you know. It was kind of interesting.

. . .

Dolores S (5 films; 12 years) Interviewer: Laurie N.

. . .

Q: Have you stopped coming to the workshop?

A: Yeah.

Q: You did? Can you tell me why?

A: Because me and Susan couldn't get along. There was two boys here and they were climbing up the window, and (?) blamed it on (?) and me, and I told them it wasn't me, and they told me (?), and then I said, "I won't come back no more."

Q: Let me ask you something. When you were here, did you have any special trouble when you mere making a film? Like editing it, shooting it or writing the scripts?

A: Editing? What does that mean?

Q: Splicing.

A: Yeah, 'cause sometimes it will get messed up in the splicing. Then you have to take the tape off and redo it.

Q: So that was hard about the splicing?

A: 'Cause you've got to cut it off and you've got to make sure you didn't cut off the wrong piece. Or if you get it messed up, you've got to do it all over.

Q: Okay. What part of film making, like editing or writing the shot lists or shooting, did you like the most?

A: The shot lists.

Q: The shot lists you liked the most? Why was that?

A: Well, what you've got to do is to write it down whether you want a medium shot or a long shot or something like that, and that's easy, because all you've got to do is to move the camera around and you can zoom in and zoom out.

Q: Okay. What part did you like the least?

A: I don't undersaand that.

Q: Well, we just said before that there's an awful lot of things you have to do to make films. You have to get the camera, you have to put the film in, you have to decide your shot lists, you have to get your actors, splice it and put it back together. And of all the things you have to do, I asked you what you liked best to do and you said the shot lists. And now I asked you what did you like the least. In other words, which part you don't like doing.

A: The splicing because you might hurt your finger. You might break the two sides and they might cut you and you've got to rub that edge of the paper even.

Q: Now I want to know, when you make a film, do you make live films or animations?

A: Live.

Q: Why did you make live films?

A: With people, right? Well, that way instead of just moving them inch by inch I can just have them walk right by.

Q: That'd be easier? Now, how many films have you made?

A: One.

Q: Did you finish the film?

A: No, I didn't edit it. I didn't splice it.

Q: Why didn't you finish it?

A: 'Cause they told me not to come up and I never came back after that.

. . .

Q: Okay. Did you like working on your film?

A: Yeah, it was good.

Q: What was good about it?

A: The shooting, the actor. There was just one person. She was nice. She did it nice.

Q: She was a good actor?

A: Uh uh.

Q: How many parts were there in your film?

A: One. I was going to do it in two, but there was only one.

Q: Okay. Can you describe the film for me?

A: Okay. I don't know the name of it, but there was a girl walking up the road. Her name was Elizabeth. She was walking up the road and she goes to the store. And she was coming back with something to eat. And she was supposed to meet her friend in front of the building. And she walked out and she came back in. She said, "Keep the money (?) eat it. She ate it, and then she went to sleep and then the telephone rang and she answered it. And then she went to sleep again. That's when they said I should put more on it (?), but I didn't.

Q: Are there any parts you would like to change if you had to do it over again?

A: No, I wouldn't. I wouldn't want to change it.

Q: Would you like to make it over again at all?

A: No, 'cause next time it might be loused up.

CHAPTER XIV

CONCLUSIONS

In this conclusion we wish to do several things:

I. Make a tentative effort at evaluating the teaching technique of the Young Filmakers on the basis of our three year study of their work.

II. Attempt to come to an understanding of the important issues in child film by evaluating the respective merits of explanations that can be derived from:

III. Film history;

IV. Social scientific analysis;

V. Analyses of the Formal characteristics of the films; and, finally, from

VI. A concern with Film aesthetics.

I. Evaluation of Young Filmakers

As we have shown, the Young Filmakers Foundation practiced its wares on the Lower East Side of New York for over a decade and brought new opportunities to children and young people that had not existed there before. Many children and youths gained an acquaintance with film making, how it is done and what it means. Some of those children went on to become film makers themselves. At some periods in the Rivington Street area, the community also shared in the enjoyment of what their children were doing with film showings.

Nothing that we have done or have to say takes away from this major achievement of these film makers in the life of the less privileged in New York City. We were the interlopers brought into conjunction with the Young Filmakers in the hope that what then occurred would contribute insight into their workings and make them more understandable and available to others. This was the aspiration and contribution of the Ford Foundation, in particular of, in turn, Oleg Labonov and Richard Kapp. But from the very beginning we were in a sense born to cross purposes. The Young Filmakers' intent was to train young people in how to make good films, and this was an artist's purpose. They looked forward to the best examples of film making and sought to see how they could be emulated; whereas we brought with us the desire to know how children "grow through films," what it is they begin with and what are the first steps, the second steps and so on. This first "zero level" presupposition that we held (without at first even knowing it) was our inheritance as Developmental Psychologists. We owed this to Darwin, Freud, Piaget and others, who had made genetic psychology a way of life for the Western world.

This presupposition, in turn, made us particularly susceptible to another assumption which has been very general amongst art educators, which is that art programs should be judged by their ability to provide opportunities for creative expression and authentic self-representation in those who receive them. We can term this here the projective assumption in art education because it has an analogue with the use of the term "projection" in Freudian theory. In the latter, the person's artistic works are taken as a "projection" of inner feelings and conflicts, and can be so diagnosed by an analyst. In the educational theory of which we are speaking, by a kind of reverse reading, art programs are judged as good or bad according to the stylistic individuality they permit to be "projected" into the medium. Thus, any training process which inhibits differences in such "projection" is inherently ineffective. Furthermore, an art training program that doesn't bring the enjoyment of creative self-discovery to all the participants is to that extent a failure.

Young Filmakers, convinced as they were that children and youths need to be taught the techniques of film making, even though they be left free to use those techniques for whatever contents they wish, were bound to fall foul of this projective educational assumption, an assumption written into various handbooks of art education issued by school boards.*

As we have shown, in the Young Filmakers' workshops only one-third of the children survived long enough to make a film. At P.S. 3, our rate was slightly better (7/12 survived, but only three of those really enjoyed it). In the animation study, where all received maximum individual attention, all survived. The long records we have given of Rose's apprenticeship (Chapter II) and the excerpts from the interviews in all our settings, however, show clearly that many of the children found learning how to make films or animation an extremely boring process. Furthermore, there are records both in these interviews and our observations showing considerable conflict between the teachers and the children. This was not an easy apprenticeship. From the point of view of educators who believe the "projective" assumption, therefore, the method of teaching used by the Young Filmakers was clearly a failure. What they did is no model of how to proceed in schools. Indeed, when as a part of the first workshop, classes of children were taken from a nearby school and worked with as a group, the whole process foundered. The teachers in the project refused to continue. In fairness, it must be added that this was only in part for philosophical reasons adduced here. It was due also to the age-old school practice of "dumping" difficult children on available art classes.

What these figures do tell us is that the Young Filmakers were running an art academy, the kind of place which has historically attracted volunteers, some of whom have had the necessary "talent" to undergo the rigorous training process required as in ballet and music and painting. They had modelled their teaching process after what good directors have to do in film making and had proceeded to teach their apprentices the necessary steps. As an academy, they were publically received as a success (hence this research); as a model for education of the kind we have just mentioned, they were not.

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* See, for example, *Art in the Primary Years*, published by the Department of Art Education of the Philadelphia School District (1966) and *A Guide to Art Education in the Secondary Schools* (1970). These issues are reviewed by Michael Paellenik in his Annenberg School of Communications dissertation, "Art Training in Schools" (University of Pennsylvania, 1979).

Whether this means that young children cannot be taught how to make films is another question. It can be argued that the "projective" assumption is a false one--that it is absurd to believe that the arts should be treated one way and that sports and academics should be treated another way. We accept that a discipline and a rigorous learning process can be a part of sport and academics and yet we do not demand it of the arts in education. There are signs that the earlier "projective" point of view is giving way to a willingness to consider art education also as a kind of discipline. From this point of view the lack of opportunities for varied kinds of art apprenticeships available to all children is a major weakness in current schooling (Gardner, 1973; Murphy & Jones, 1976; Wilson & Wilson, 1977). If this latter point of view prevails, then what has been achieved here by the Young Filmakers will be regarded as a success, not a failure. For a third of a group of volunteers to proceed to the point of making at least one film, and for yet a smaller percentage to proceed over several years of hard work to make several or more films, may be regarded as an accomplishment of a very high order.

Perhaps instead of demonstrating the relativity of evaluation to philosophical point of view, however, it might be more practical to ask whether there is any other way of teaching films to young children which might be more immediately successful than the one used by the Young Filmakers. In search of such an answer we had a number of those who teach children how to make films come talk to us. Now their talk and our response is no firm evidence about anything, but we did discover that there are a number of other ways in which children can learn about film making and it is possible that some of these might sufficiently speed up the course of learning to cut down on boredom and facilitate more immediate feedback so that a larger number of children might find more interest in them and proceed onwards to success than through the kind of narrative to shot list to editing approach used by Young Filmakers. For example, some teachers told us of the following techniques, any or all of which might speed up the process and heighten the motivation: (a) painting directly on the film; (b) film directly without too lengthy a period of prior planning; (c) animate children's own art work; (d) make films in association with theater so that it is the children's plays that are being filmsd; (e) have children use videotape with its immediate feedback; and (f) have children make animations on books of transparencies so that small films can be made from them very quickly.

Some of these techniques have been written about in various "how to do it" books with considerable enthusiasm by their protagonists (Anderson, 1970; Lidstone & McIntosh, 1970; Haratonik & Laybourne, 1974), and we have reviewed them elsewhere (Sutton-Smith, 1977). The answer that is just around the corner, however, may well be the newly invented immediate development process whereby the film maker has a copy of the film as soon as filming is over. It would be our hunch that there is much to be said for beginning film making instruction by making films directly as do most average camera buffs. It is understandable that the expenses of film and development in the early days of the children's film movement would have led to the more deliberate techniques used by the Young Filmakers. This may no longer be a necessary way to begin, even though in the long run all those steps of procedure would still be used by those who would choose to proceed further with the discipline. Still, these are only casual remarks on our own part. We can claim no special competence. We were not given the task of considering all film making for children, only that which was carried out by Young Filmakers.

II. Issues in Child Film Making

Our approach has been largely an inductive one. We sought to the extent that we could to make records and measurements of whatever was available to us. Like most psychologists we were pragmatic and tool-oriented, rather than particularly theoretical. Had we followed major trends in the psychology of the arts (psychodynamic and psychosociological) we might well have restricted ourselves to studying the psychological characteristics of the film makers and ignored the films themselves except as one way of choosing between the good and the poor film makers. That is, we would have concentrated on their autobiographies or their perceptual or cognitive characteristics, their creativity or other psychic processes, but have made little other effort to deal with their films (Barron, 1968; McKinnon, 1965; Helson, 1973; Martindale, 1978). Irving Child has suggested that this kind of approach is wisdom for the psychologist who is otherwise like a bull in a china shop with no special competence to deal with art products in their own right. While we did not follow this advice, we did raise for ourselves the question of what value this kind of intrapsychic psychological data has in the understanding of what occurred in our own project.

Amongst communicational theorists, we were more fortunate to find a number whose major effort had been spent in the study of film making (Worth & Adair, 1972; Chalfen, 1976). In their book, Through Navajo Eyes, Worth and Adair present the thesis that when films are made by people with minimum intervention, then their usage of the films reveals the way they code, cognize and value their world, revelations which may not be so obvious in other cultural materials. For them, film is a special kind of communication and therefore a special kind of speech act. Much of film ethnography is based on this assumption. Working with youths in a number of groups in Philadelphia, for example, Chalfen found that lower class youths preferred to be the actors in their own films and were not particularly interested in the technicalities of film making. Middle class youths, on the other hand, found the directorial role of greatest interest to them. While Chalfen's data, like ours, is tentative because it was based on a limited number of group case studies, it did suggest that film as a "medium" can mean different things to different groups. Unfortunately, because our Young Filmakers were more intrusive than Chalfen, our medium was less "open" for such "projective" interpretations (though the content was). The method of learning was modelled more directly by the Young Filmakers. On the other hand, one can argue perhaps that this was an advantage because the teachers' own roles were more clearly established, whereas in Chalfen's attempt not to have any particular influence, the issue of what influence he really did have (or that Worth and Adair had) is left more ambiguous, as Margaret Mead (1975) has pointed out. Nevertheless, the communication tradition of studies (Hymes, 1964; Worth & Gross, 1974; etc.) importantly calls our attention to the specific situation in which film learning takes place. It asks us to consider the film as a meaningful product arising out of the interaction of all the constituents in the film making situation. There is the teaching setting, the workshop located in part of the city or in a school, with all that that implies both physically and culturally. Within the setting there are the teachers, their views, their methods, and the equipment. Coming to this setting are individuals and groups with various ethnic, sociological and psychological characteristics and expectations. Out of the interaction of these elements arises a series of meaningful events which ultimately take the form of a film and of a response to that film. This response may be generalized beyond the workshop to the larger community and may be called "aesthetic." The process of making the film may be influenced by the researchers as well as the teachers. Furthermore, film making is itself a culture and a history mediated to the students by teachers as well as television and their own experience in seeing films.

What all this leads to is the question of which of these kinds of variables seems to have been the most use in explaining what we ultimately found. While no definitive answer can be given because we did not plan things that way ahead of time (indeed we could not have), at least we have some opportunity with data we have assembled of arriving at some tentative ideas of how these various constituents enter into the process.

III. The History of Film Making

Before our study began, and before the Young Filmakers began their work, both they and the children and youths who were to work with them were, willingly or not, immersed in the culture of films. All of us have been seeing films constantly over the past thirty to fifty years and are undoubtedly in various ways their creatures. We can think of at least two (and there must be many more) useful approaches to take.

A. Film History and Child Development

One thesis could be that the history of film from its beginnings at the end of the 19th century was a developmental process which might well be repeated in the way in which our children learned film making. As John Culken opined in a witty moment at the Winneska Children's Film Conference in New York, "Perhaps ontogeny recapitulates montage." Let us try this out briefly.

The earliest films of the 1890's were devoid of narrative content and lasted for a few seconds only. They were meant to record moving images and there was no attempt at narrative. They were plotless and recorded everyday events such as the movement of the sea, a fire, a kiss. The action took place on an undefined background (Lawsen, 1967; Solomon, 1972; Jacobs, 1939).

While the first step in film making thus seemed to focus on whether film images were discernable, very soon they shifted to a concern for whether they were meaningful. Narrative content in film making came next. A Frenchman, George Melies, is given the major credit for using the camera as if it were viewing a stage play, and watching a succession of narrative scenes. His film, Cinderella, of 1900 was composed of twenty such scenes. He added to the theater, however, the special virtuosity of the film's ability to show magical appearances and disappearances, fades, dissolves, and the faster or slower motion of events. Still, stage acting, stage movement, stage stories and stage actors dominated these early films. The camera was assumed to be a spectator. It was placed in a fixed position and rendered the action from a static viewpoint. Camera distance also remained fixed, preserving the constant figure ground relationships common to theatrical viewing.

The American, Porter, added the next step by liberating the camera from such a fixed viewing posture. In the now classic Train Robbery of 1902, the camera was placed in different positions and the technique of editing was introduced. Through editing, Porter introduced parallel movement with all its suspense creating possibilities. Film was now free of the spatio-temporal strictures of conventional theatricality.

Still Porter tended to stay with fixed camera distances. It was Griffiths who mastered the camera as an even more mobile device using close-ups, pans, full shots, medium shots, etc. And in editing he used jump cuts, intercutting, cutaways. The camera as a technical device was adding to the exictement of the narrative. In more recent years, of course, we have seen attempts to reject the narrative control of the medium and use film more purely as a medium in its own right, as in Hiroshima Mon Amour, Last Year at Marienbad, Providence, etc. (Manoogian, 1966; Mast, 1976).

In some senses, microgenesis cannot help but follow this kind of macrogenesis because this is the history (however cursory) of a more limited to a more flexible use of a novel technical tool. Such changes are a constant feature of child development and are well enough captured in Werner's orthogenetic law (1948), which says that in the development of skills we always find increasing differentiation and hierarchic integration.

And indeed our contrast of the films made by the younger members of our workshop project (8-11 years) with those of older members (12-15 years), or of the earlier films they make as against their later films, shows always a trend from earlier limited and fixed uses towards greater flexibility, both with the camera and in editing.

In addition, what our study shows more markedly than the film histories tell us is the staggering decrease in errors over time. The strongest developmental statistic we have is the decrease in framing errors. Presumably that kind of error was already ironed out of existence in the 1890's, or is alternatively not thought worthy of official history. Or perhaps early history was about framing itself-- an explanation of the frame in the film prior to a concern with narrative or theatric meaning.

But the animation study, which involved a more carefully controlled teaching technique, is perhaps a better source of developmental-historical parallels. Our very youngest, 5-6 year old children drop off the other end of the scale; that is, they did not even use the camera as a recording device. Instead they played with both it and the toys which were to be filmed, grouping them all together in various patterns, usually around the camera. Despite instructions, despite history, theirs was a more manipulative approach to the phenomena. But the 7-8 year olds did attempt to use the camera to record their story. They did leave it in a fixed position, often mistakenly assuming in a preoperational way that it could see what they could see. By 9-11 years they became more concerned with the Melies theatric scene and arranged for various stage differentiations. The camera also became a more adequate monitor of flux, rather than only a rather rigid recorder of the beginnings and endings of events with bedazzling consequences for the subsequent viewer. From 12 years onwards, we begin to get Porter and occasionally Griffiths kind of variations in camera position and mobility. Although in the animation experiment, they were not taught editing, they did use in-camera cutting with a comprehensible relationship to the narration. Some even reached the heights of dispensing with their narratives.

So a parallel is established, which fulfils Werner's statements about such movements from the simple to the complex. (We do not invoke any film making archetype.) In addition to our work we have had access to films made by young children almost without any instruction being given or any attempt to create a story. In a program carried out by Jill Levine, Mike Feller and Terry Baker at Teachers College in New York in 1972-1973, five-year-olds were given cameras, and told to shoot what they would (also referred to in Lidstone & McIntosh, 1970). Certain features stand out. First there is a dominance of "bit" shots. Each piece tends to be separate from each other piece. There may be many shots of the ground, of trees, of buildings, of people, but there is no pattern to all this except that provided by the contiguous environment in which the film maker finds himself. Most of the children took shots of other film makers as if thus establishing an introductory or a topical marker for their own activity. Children apparently found it interesting to focus on objects and thus bring them into the foreground. The objects (grass, leaves, stairs, people, dogs, bits of paper) tended to be those which in this situation would have dropped into the background of adult attention. Unlike the earliest adult film makers who concentrated on events (the kiss, the fire), children seem to have their attentive processes at an even more segmental level, perhaps an object level (putting aside, that is, the possibility that the films we examined, N=20, were that way because of the location of the film making).

Another characteristic, however, was to treat the camera as an object and make it whirl about (with dizzying pans), or cut from one thing to the next with dizzying speed. Some children's own hyperkinetic movement was communicated through the camera, which reflected their own body actions more than any state of the environment. This kind of action with the camera we would again have to classify as more pre-historical, more relevant to children's needs for movement, rather than to the history of film making except in some very early phases of exceptional clumsiness.

In sum, there is much to be seen in children's film making that is forecast in the history of adult film making, in chief the move from the less to the more flexible use of camera and the gradual reduction in the control of the narrative or theatric model over the film construction itself. These sorts of changes can be envisaged as we have mentioned by Wernerian developmental theory, although perhaps, too, there is some other historical tendency for a new perceptual tool to be used first as a novel way to reach out and mirror reality in a naively realistic sense. With time the same tool becomes more flexibly integrated with other forms of knowledge, and then finally comes into its own right, manipulated for the unique perceptual effects that it makes possible. Perhaps, if some such law of perceptual tool development is legitimate, either adults or children will inevitably show parallel progress.

Still, as we have seen, our very youngest children up to the age of about seven years do not fit the parallel. Their focus on objects is not the same as the 1890's focus on events. Their kinesis with the camera or with the camera and toys is not prefigured in film history. Their inability to use the camera as a medium of representation and their host of errors are not part of official film history.

B. Mass Media and Stereotyped Film Technique

Another way in which the culture of films might well have affected our children more directly was through their own viewing of films and their acquisition of, at least, stereotypic film technique. This was the point of view taken by Griffin in his analysis of the films in Chapter IX. He calls attention to the following techniques in his groups I-VI of increasing sophistication.

Groups I and II.

1. The role of movement in the content of children's film making and camera work as simply a following of that movement with excess connecting and moving pans (and moving pan errors). There is little cutting from one object, perspective or distance to another. In some films, half of the shots are of this kind.

2. There is some match cutting of continuous actions.

3. There is some cross cutting of pursuer and pursued.

4. Narrative sequences are structured around moving actions or motion-directed sequences.

5. The victim of an attack is shown in close-up. These shots are interjected into a structure which otherwise makes little use of sudden transitions from one focal length to another.

6. There is some paralleling of protagonist and antagonist as they approach each other.

Group III.

7. The dominant use of camera trickery for illusory purposes (appearance and disappearance, illusion of falling, etc.).

Group IV

8. The plot structure is like that of television shows except fighting sequences are likely to replace plot elaboration.

9. Cuts from a shot going in a door to a shot looking down at the door from the top of the stairs inside; cross cuts between the heroine and the men who kill her during their confrontation, including very low angle shots of the men to emphasize their threat; looking up and down the street with reverse angles; movement of camera to build up a drug high.

10. There are close-ups, zoom ins and close shots that are more intimate and remindful of conventional television scenes.

Group V.

11. The attempt to reproduce a television genre or to parody it becomes evident. There are parodied commercials, news shows, Frankenstein movies, bionic kid, etc.

12. Conversations are aided by reversing back and forth between medium and close shots as the characters talk to each other.

13. Zooming and electronic sounds are copied from the bionic genre.

Now it is Griffin's point of view that the earliest of these techniques (1-6) are picked up almost unwittingly from television or film experiences that the children have; whereas the other techniques (7-13 and others he mentions) are chosen more consciously by the children from what they have observed. There are several weaknesses to his thesis as presented. We do not know whether these are the highest frequency or most salient of television techniques which the children perceive, although that could be assessed. At least we have the hypothesis that the techniques 1-13 above are those that have some kind of predominance on television and that that is the reason they enter into children's own film making. Which is to say that children are in part being taught their film making by these cultural models (just as the Wilson's found children who cared about it being taught drawing not on schools, but where they could find models to copy, in the comic books). Another interpretation might be that these are the technqques which are presented to the children by the teachers. However, our own examination of the teaching techniques (Chapter II) or the books produced by Young Filmakers does not show any particular teacher bias towards this particular array. So perhaps Griffin is correct. The language of film that these children are adopting is that which is most salient in their film-television environment. He concludes his analysis quite definitely as follows:

> An increased concern with social influences, media models and audience response seems to be a function of age. The ability to manipulate cinematic form for the purposes of competent communication seems to be related more to film-making experience.
>
> I think that the six categories represent a progression from a conception of film-making in which children are simply showing something on a film to one in which they are constructing a film, the final stage being the creation of a skillfully manipulated artefact for an audience. In these six groups, children of varying ages and different levels of film experience can be seen to be working their way through the potentials of the medium. The patterns of this progression reflect a complex interaction of media specific skills and social and cultural experience. It is naive to think that some form of independent development is being expressed, or revealed to us through the medium. The development that is exhibited is a development in the medium. Younger children's films are centered around a propensity to show certain prominent actions repeatedly (especially walking, chasing and fighting). Older children's films are still preoccupied with the same kinds of actions though they tend to become concerned with setting these actions on a more naturalistic stage. In the films of both younger and older children there are formal conventions that emerge intermittently in early film-making attempts and become increasingly systematic in the later films. By attending to form of content and form of narrative we can see these films as a process of

> grappling with and learning conventions, and not simply as the uncontaminated expressions of "innocent" artists.
>
> Many are under the illusion that anyone can effortlessly "record" whatever he wants with a camera, and that it therefore provides a vehicle for expression nearly devoid of technical obstacles. It does not really occur to them that asking a child to express himself through the creation of a spontaneously shot film--thinking that this will in some way reveal characteristics of his cognitive level and world view--is like asking him to express himself on the piano without ever having learned how to play it. Without the skill or knowledge to construct melodies, harmonies, or rhythmic patterns, what does a child's banging on a piano mean to us? (Griffin, 1978; pp. 102-103)

If Griffin's argument is valid much of what we have shown is simply that when children get a chance to make films, they make films which are a caricature (witting or unwitting) of those that they see. And this, in turn, means that the greatest part of the variance in film making is the adoption in this way of the cultural templates. While this would not be a startling finding, it does serve to keep in perspective everything else which we must now add to the analysis.

IV. Social Scientific Analysis

A. The Culture of the Teachers and the Children

Although we do not have anything very systematic to say about the role of the cultural membership of each of these varied groups, we do have illustrations of their influence. The teachers varied in ethnic membership (Anglo, Jewish, Puerto Rican), in ideological interests and in the kind of relationships they seemed to prefer with the children, as well as in their own maleness-femaleness. Chapters II and III show a fairly characteristic female-male difference, with the female teacher allowing more dependency and the male teacher requiring more autonomy. At the workshop the male teacher who was most singularly interested in film making technique (and not in ideology) is associated with the most sophisticated films that were produced. It is hard to estimate the amount of influence that these factors have, but they are not inconsiderable in a kind of training that forces the child into such a dependent apprenticeship.

The variety of children, White, Black, Spanish and Chinese, produced a variety of minor effects on the films (Black=shorter shot length, Puerto Rican=longer shot length, etc.), but as these groups also varied by the setting in which we studied them and were not sufficiently numerous in most cases (Black and Chinese), conclusions are limited. It is noticeable that the Puerto Rican children in their own neighborhood at the Rivington workshop felt much freer to use the streets and in consequence produced films with more exterior locations. Traditional male-female child differences show through in the middle class White films made at P.S. 3 and in Bronxville. For example, in the animation study, boys used more of the war toys and vehicles, and girls more of the animals and people. At the Henry Street-Ludlow workshop, however, these traditional sex-role cultural differences appear to have been overridden by the Puerto Rican boy dominant, macho film culture that developed there. It will be remembered at Henry Street that there was violence between Puerto Rican and Black girls with a knife wielding incident. This is not to say that the films were not normative boy culture, only that the girls in this more constrained setting perhaps gave up their "usual" forms of expression on behalf of equally "masculine" film topics and concerns-- though interestingly vampire attacks occur on occasion to those just married, a sneaking intrusion of traditional concerns.

B. Specific Settings

The P.S. 3 and Bronxville settings both required high dependency on a female teacher for success and, as we have seen, the male drop-out rate and dissatisfaction rate was much higher than that for the females. This is not, however, untypical for middle class White school teaching situations, and the content of the films and animations produced by the boys and girls was quite traditional.

At the workshops we can contrast the Rivington Street films against the Henry Street-Ludlow films. Safety in the Rivington neighborhood permitted the children more outdoor location work and their films were in consequence freer from teacher supervision and less sophisticated. In the more dangerous Henry Street neighborhood the films favored more indoor locations, were more carefully supervised and were, in consequence, more sophisticated. Again, the shift from the more dangerous Henry Street, to which access was more difficult, to the less dangerous Ludlow Street, which was more accessible, produced a less committed and less enduring kind of volunteer and these differences showed up in the latter children now showing the psychological impact (on our measures) with the same intensity as did the children at the Henry Street settlement.

Most importantly, all settings were specified as places for learning how to make films and all contained an impressive (for young children) amount of professional equipment, which they were permitted to manipulate and to use. For the girls, at least, this was a highly novel and enriching experience. Within that setting, as we have repeatedly stated, conditions of apprentice-like dependency were required, although in the workshop the film making groups also developed considerable peer autonomy as the case study of "The Detective" illustrates.

C. The Psychology of the Film Maker

The children who came to the workshop as volunteers were undoubtedly different from others who did not come. To begin with, the boys and even more strikingly the girls were of higher than average intelligence for their cultural groups. We suspect that the same above-average intelligence was typical of the school work groups.

When these volunteers are themselves divided into those who stayed with the project and those who dropped out, we find that the drop-outs: (a) were of lower IQ (performance); and (b) had higher scores on the Torrance Figural Test of Creative Thinking. Those who stayed to complete one or more films had: (a) higher scores on picture completion; (b) higher scores on object assembly; (c) more film making experience; (d) higher memory for films that had been observed being made in New York; and (e) were more often first born (and not later born).

It was a shock to us to discover that those who dropped out were already somewhat more creative. This means that they had the labile free associational competence required by that particular test (Torrance). But when we look at the characteristics of those who survived and consider the analytic competences required by the tasks of camera work and editing, as well as the dependency required in order to garner information from the teachers, it all makes more sense. The literature shows that first borns are superior when it comes to succeeding through the use of affiliation than are later borns. Their long and closer apprenticeship with their own parents seems to pay off when they must work with other adults (Sutton-Smith & Rosenberg, 1971). That they may also have to be individuals who are already disposed to perceive things more analytically, as the tests suggest (picture completion and object assembly), also makes sense. The large interviews yielded very little, but both the items appear to indicate somewhat greater motivation towards film making as an experience.

While there are probably many other perceptual and cognitive and characterological variables that might be relevant to the full picture, enough differences are presented to suggest that once again the art form selects out those who have special talents, just as the sporting life and academia also select out those who have special talents.

We doubt that these predispositions which qualify the group that stays for training are sufficient to explain much of what goes on in the film making itself. The predispositions qualify the group for the kind of cognitive and social competences that are necessary for success, but having these does not tell us much about the content and form of the films that result. It is certainly possible that there are differences within the success group in these and yet other unexamined psychological properties which would help to explain the films that are produced, and this is the kind of thinking which one finds in psychodynamic theories of art. But given the fairly stereotypic content and structure of the films, we have some doubts as to its importance in this project. Obviously when dealing with the highly talented or genius artists, small scale psychological differences might well be critical. When dealing with a fairly normal, if not average, population of child learners, that need not be the case. It is our judgment, therefore, that these psychological predispositions that qualify the children for entry and continuance in film making in the present project are important as entry tickets, but do not have much to tell us about the film making that then must take place.

But there are other psychological characteristics of the film makers of a developmental kind which also help predetermine what they can do. These are the characteristics which are stressed in the Zarem study of animation. From her analysis, it appears that these children are under a large number of cognitive restraints in the ways in which they can conceptualize movement, space, narration and representation. However, hers was a study without feedback, and so we have no measure of the extent to which the children would have been able to modify their responses once they had been able to see what they had produced and made another film. In the workshop studies, where the children made several films and could profit by experience, most of the variance was accounted for by experience. Still, a considerable amount of the variance in that study was also due to age. And what age implies is the working of fairly stable cognitive operations which do not change readily even with experience. This means that the detailed Zarum account must indeed be kept in mind. There are sequential ways in which children come to understand representation, narrative, movement and space, and the animation study gives a clearer account of these than do the workshop studies. Although the workshop studies focus on the films and film technique, there is less focus on how children conceptualized representation, space and movement, because with the moving camera so much of that is provided for them.

D. Psycholgical Impact of Film Making Experience

We deal here with what can be called the psychological or educational impact of the film making experience on those who participate. It has long been held that forms of art have valuable educational effects upon the learners. The systematic empirical evicence that this in indeed the case is unfortunately very poor, although the anecdotal evidence seems to be abundant.

In general we expected improvement on the performance aspects of the WISC because the tests are analogous in various ways to the cognitive organization required in making either live or animated films. We expected improvement on the Witkin embedded figures because the process of editing sometimes takes hundreds of hours of disembedding appropriate frames for cuts. We thought that these hundreds of hours of inner direction ought to have some effect on experienced locus of control.

Our strongest finding is that the longer the children stayed in the workshop program the higher became their scores on the embedded figures test. This is a measure which Witkin holds to be quite resistant to change, though it changed markedly for our long-term workshop children. Field independence is regarded as a cognitive style of wide characterological implication. The possessor is more analytic in perceptual and cognitive tasks and is more autonomous socially than is the field dependent person (Witkin & Goodenough, 1976). The drop-outs' scores on this variable did not change over the same period of time. Children who stayed beyond one year also showed significant increases in their WISC picture arrangement performances (a task not unlike that required in animation studies). Children who stayed with the project also showed a significant shift towards higher internal locus of control. There seems considerable evidence in these results that children who have the film experience have learned to articulate reality in new says, and it seems probable (though not proven) that their new articulations generalize to other domains of life, simply because field independence and locus of control have been shown to be pervasive variables.

The fact that the children did not differ initially on embedded figures, but did on picture completion and object assembly, and on the Torrance creativity tests, and differed ultimately on picture arrangement and embedded figures, implies some more complex arrangement of competences than admits of simple interpretation. It seems to suggest that there might be a difference between predisposing competences (object assembly and picture completion), which facilitate analogous learned competences (embedded figures and picture arrangement), the latter being more specific to the film making task.

We would stress that these are rather unique findings in the literature of psychological aesthetics and offer the promise that similar findings are possible in other expressive areas. They imply that kinds of art experience have unique formative effects on psychological development. We would point out that the literatures on games and play have established that similar formative effects result from the mastery of their expressive systems.

E. Children's Reactions to Film Experience

As Irving Child has said, psychologists prefer to deal with the antecedents and the consequences of the art form rather than the form itself. While we do not have any carefully measured accounts of the impact on audiences of the films produced by these children, we do have some data on the children's own reactions to their own films. Almost everyone in all three studies complained about the tedious length of time involved in working on animation or live film making. Some of those who dropped out explicitly complained of their unwillingness to continue drawing shot after shot for animation purposes. By and large, however, the workshop children who were there for a longer period of time,had more instruction and more facilities, and were more highly self-selected, were happier about their own results.

In the two more controlled studies, where teaching was confined usually to one film or one animation, reactions were much more negative. In the group of twelve children, five dropped out. Of those who remained, only the one child out of seven who got very special treatment, the full-time of one instructor for the majority of sessions, seemed favorably disposed towards her own film on viewing it. The other six were either hostile or disappointed or very unwilling even to be interviewed on the subject. Their disappointment had several grounds. Some of those who had had prior film making experience and who had wanted to be fairly independent in their own film making, were simply destroyed by the quite inferior and inadequate products they produced. Others, again, found the process tedious.

In the animation study, by and large the girls enjoyed the project and the older boys complained about it. The boys apparently felt that it was "childish," a by-product of having to deal with the same toys and objects that we used throughout the project for five- to fifteen-year-olds. The girls expressed enjoyment of having access to technical facilities; the boys expressed disappointment that the arrangements did not allow them to do more sophisticated things.

V. Formal Characteristics of Children's Film

The artist, unlike the psychologist, is more concerned with the work of art itself than the motivations and characteristics of the artist. In our films he would find more things that make the approach of the children a common one, rather than manifestations of individual difference.

A. On the Content level, one can see from the titles of the films in Table 51, presented on page 413, that children, although much affected by modern television, still pursue the classic themes of chase and escape, attack and defense, which have dominated their folk play behavior for centuries. Their films are folk films, and folk film art, at least in content terms. Our predispositional and situational factors did not take this away from them.

B. On the Narrative level, the films follow the usual sequences of disequili-

Table 51

Film Titles at the Workshop

Males	Females
7-10 Years	
House of Vampires	Dracula Story
Cow Robbers	The Creeper
Dracula Kills a Woman	Friends
Vampire in the Tree	Lost Girl
Boxing	I Dream of Jeannie
End of the World	
Indians Who Have Tails	
Vampire Who Hide in a Tree	
11-15 Years	
Channel 6 News	The Murder
The Detective	Hungry Monster
Wrong Way to Make a Movie	Baron Blood
Bag Full of Sorrows	Three Girls Who Get Killed
Monster in Central Park	Desperate Girl
The Magic Stick	The Cookie Show
Twin Magic	Mary's First Friend
It	The Picnic
The Bionic Kid	Marriage Movie
Return of the Days of Old	Roach Killer Shoes
Kung Fu; Why; The Playful Phantoms	Teenage Werewolf Dies Again
A Friend in Need	

brium followed by equilibrium or resolution. Their structural character can be analyzed in the same way that their story narratives can be analyzed. Our studies of the parallels between the free stories these film makers have told at other times, the stories they make up for their films and the stories they tell through the film, indicate parallelism, except that at each step the tale becomes simpler. The constraints of telling a story for the camera and of telling a story through a camera, each reduces the complexity of the story to be told. At least this is true until about eleven years of age, after which children seem to gain considerable freedom from the restrictions of narrative and are able to use the camera in its own right, producing magical and satirical films. The film, "Wrong Way to Make a Movie," is such an example. It begins with a boy announcing to another, in the midst of gross framing errors and lighting confusions, that his wife has "terminal chicken pox." This is repeated many times on subsequent takes. The ultimate response is, "easy come, easy go." Here film technique and interest dominates narrative.

C. Children's film making in our sample includes various preferred Images. These may not generalize, but we suspect that, like the content of their films, they are probably typical of many children. Thus, favorite film shots include: people walking down the street, running, chasing; dead bodies on the ground; helping the injured along; assault and chase, scuffle, fight, wrestle; bandaging the injured; going in or out of doors; going to bed, sleeping.

To this point we have emphasized that film as a genre has certain characteristics that may be more important to understanding children's film than psychological knowledge of the individual film makers.

D. Technical. Although many elements are involved, film as an art form must first and foremost require mastery of film technique, and the technique of film making exacts its own requirements from the children. Thus, there is a positive correlation across our workshop sample between the use of interior shots and close-ups (after all, who can use distance shots inside a room). There is low variance of angles on interior shots (rooms restrict you again). In film making the medium high shot and the medium distance shot is the conventional stance for most of our film makers. Not surprisingly, therefore, the exceptional children do it differently, so that we find the medium low shot is related to the amount of angle variation (r=.71) and to the amount of variation in distance (r=.30). The child who is versatile in one thing tends to be versatile in others. Medium low shots are the creative shots with our group. Some relationships are particularly childlike. Exteriors are related to extreme high shots. Why? Because out of doors most of the murders occur, and that always includes shots of dead bodies on the ground. Other obvious correlates include the positive relationship between horizontal shots and long distances; the farther away you are the more horizontal is the angle. Asynchronous sound effects correlate with both of them (horizontal shots and long distances) because background sounds are most commonly used in outdoor shots in which characters are seen at a distance.

E. Coordination of Codes. Making a film requires a coordination at least of the movements and spatial distribution of the players or the animation materials. Younger children more often do animation than films simply because the social logistics of managing the actors is beyond them. As we have mentioned, control of movement flux and of objective spatial arrangements are necessary film making competences through which the narrative must be mediated. As Kjorup has said, film is a meeting place of multiple codes, and what is salient in most of the children's film making that we see is that the greatest amount of time is spent in mastering these codes and their interrelationships. The greatest part of film making for children has to do with such skill mastery. We suspect that in this lies the reason that the more labile creative children and the less characterologically persistent children drop out. The tasks were simply too focused and too demanding of persistence for them.

VI. Aesthetics of Children's Film Making

A. Creativity

Unlike the psychologist, the artist is concerned not with some general trait of creativity (supposedly measured by the Torrance), but with creativity within the medium itself. What we have shown, however, is that most of our children are repeating folk themes in their formal film content. They are mastering skills rather than being particularly creative with them.

Creativity, as we see it in children, is usually the permutation of some central idea or action, through a novel associative series of some sort. There is usually some central vector or structure which is then permutated through associations which are contiguous, similar, reversed or whatever. By and large, the films of those under eleven years are not so creative. They are full of childish vitality and action, but the plots and actions are stereotyped. It is easy to mistake the vitality and playful imagery for creativity. Beyond eleven years we found much more genuine creativity, though again more in the verbal accompaniment of the films than in film technique. Thus in the movie, "It," Count Frankenstein sends Igor out to get a pair of lungs for the monster he is creating and at the same time instructs him to bring back a bologna sandwich. In the long run, Count Frankenstein dies not from his own malefactiors but from bologna poisoning. This kind of twist, along with the piece about the mother having terminal chicken pox, testifies to creativity in ideas and words, but says nothing much about films. Still, we do get occasional examples in our sample of what we might term filmic creativity. In "A Night of Television Watching," for example, our 14-year-old shows a boy watching television and then as we zoom in on the set we see the reality behind the television. Here the film maker first videotaped an event, then presented it as if it was a television program. Then he filmed the actor watching the event on television, next zoomed in on the television, finally showed the same event occurring on film outdoors. There is the novelty of the idea of the relationship between television and reality, but more importantly there was novelty in both videotaping a scene outdoors which was then simulated as a television presentation, then filming the television watching, and then filming the same scene outdoors so that all are combined into a homology of television, film and life. The message is perhaps that television and film and life are the same thing and one frame is as good as another.

B. A Childish Aesthetic

Children and adults tend at first at least to find children's films amusing. This positive response suggests that there is something about children's films that is appealing to adults, at least on first exposure. I would like to suggest that one basis for this appeal is the child aesthetic that children use. In their play children very thinly schematize what they have in mind. Their involvement is largely subjective; the merest rubric will suggest what they are doing. Or, as Gombrich says in discussing primitive art, function dominates form. In their first films children use a similar bare schematism to indicate that they are about and the clear childishness of this evokes both nostalgia and amusement in the adult. What we see might not be developed aesthetic, but it is a kind of aesthetic of the "minimum image which will fit into a psychological lock," as Gombrich (1971, p. 8) puts it. Thus two girls put pieces of cardboard on their heads to indicate they are cats; another girl wears a paper bag to indicate she is a cow; boys wearing cardboard boxes are from outer space; a cloak makes dracula, etc.

But in addition to characteristic forms of minimal imagery, children's films are full of movement. Their content has the vitality of the makers. Their art forms are more kinetic than those of adults. This again contributes to our enjoyment of them.

Aesthetic effects it seems are more frequent than creativity in children's films. The very fact that the film is a meeting ground of many codes means that there will be an almost inevitable synthesis of such codes with varying degrees of appropriateness. If creativity is a permutation of novel juxtapositions, the aesthetic is a synthesis (not always novel) of divergent schema. In the youngest children's films, for example, a popular song usually constitutes the sound track. In a movie in which a monster pursues a girl, we hear the sound of the song, "Look Away Little Girl." This is minimal synthesis (just as the cloak on the pursuer is minimal representation). Still the integrity of the song, and the folk integrity of the chase scene, implant a pleasantness to the total if minimal aesthetic of the film. When older children attempt to put in more appropriate sounds and dub voices more appropriately, the impact is somethmes anything but aesthetic. Still there are many efforts at filmic aesthetic. One of the children's favorites is the rocking camera which is variously used to indicate some state of vertigo in the actors. It is used when someone faints, when they are falling, when they are high on drugs. As often as not, along with framing errors, it does not work. But sometimes it does and is well done. Again, sound effects which cumulate in intensity are sometimes coordinated with the drama of the action with good cumulative impact. In one movie the menace of the pursuers is nicely coordinated with a very low shot of their silhouetted dark figures against the light sky. A drug high is coordinated with a 180 degree turn around the figure and a focus through the tree brances at the shining sun, giving a vertiginous and twinkling diffuse effect. In a pursuit scene, extreme close-ups are shown of the pursuer such that one cannot really see the face, but with pounding beat sounds, tension and mystery are amplified effectively. The way in which an aesthetic effect can be most effective, even though not particularly creative, is demonstrated again in our Frankenstein movie when the police approach the castle (the weather building in Central Park). The opening beats of Beethoven's Fifth Symphony ring out and it is all very striking, though the pairing of castle and Beethoven is hardly very novel.

Conclusion

We have in this conclusion attempted a broad contrast between the type of variables that usually interest the psychologist and those that usually interest the artist. Our general conclusion is that for these three studies there is more to be learned about children's film making by focus on the artist's variables than on those of the psychologist. The study of film history and of the film's formal, technical and skill characteristics tell us a great deal of what children are about in film making. We learn considerably less about creativity and aesthetics, although that is largely, we suppose, because we are studying child amateurs rather than developed artists. All of this leads us to the conclusion that much of what we have measured in our studies has to do with the acquisition of kinds of film mastery.

The psychological variables are incidental to all of this although not unimportant as we have seen. We see that there are predisposing characteristics of those who continue in these studies, and that teacher and method have a powerful impact on who stays in and on what occurs psychologically to those who do stay in. But again, we may have diminished the importance of the film maker's psychology by dealing with amateur rather than genius, and that has not been the usual procedure in psychological studies.

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APPENDIX A

FILMS PRODUCED AT THE YOUNG FILMMAKERS SUPER-8 WORKSHOP

PART I: 1969 THROUGH SPRING 1974

Film Maker	Seq #	Film Title	Registration Date	Date of Birth	Age at Regis.	Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location
Fernando A			3/30/72	8/30/63	8							
	1	Boy Who Stole the Jewels				L	C	S?	4		8	
Migdalia A			3/18/72	3/ 9/61	11							
	1	Girl Who Had A Baby				L	C	S?	4	1972	11	
Edwin A												
	1	Cisco Kid				L	C	S?	3	10/70	8/9	R?
Hector A			10/16/70	12/28/58	11							
	1	Hector's Movie				L	C	S?	3	1970	11	
Manuel A			1/13/71	11/10/59	11							
		The Bad Robin Hood				A	C	N	3	1971	11/13	
		The School Story				L	C	S?	3	1971	11/13	
Tito B			9/16/70	10/14/58	11							
	1	The Young Punks				L	C	S?	5	1970	12?	R?
Nora B												
	1	The Marraige Couple				L?					11?	P
Jose B			6/ 1/72	12/15/58	13							
	1	Kid Who Got Caught in the Act				L		S?		Sp 72	13	P
	2	Wolfman in Rivington Street				L		S?		Sp 72	13	R?
	3	Trouble Maker				L		S?		Su 72	13	R?
	4	The FBI				L		S?		Su 72	13	P
	5	The Toughest Cowboy				L		S?		Su 72	13	R?
	6	The Invisible Man				L		S?		Su 72	13	P
	7	Championship Wrestling				L		S?		Su 72	13	P
	8	Sheriff Who Saves the Town				L		S?		Fa 72	13	R?
	9	The Mafia Kills the FBI				L		S?		Fa 72	13	R?
	10	West Side Story				L		S?		W 72-73	14	R?
	11	Spiderman				A		S?		W 72-73	14	P
	12	Superfly				L		S?		Sp 73	14	R?
	13	Land of the Giants				A		S?		Sp 73	14	P

APPENDIX A (cont'd)

Film Maker	Registration Date	Date of Birth	Age at Regis.	Seq #	Film Title	Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
Jose B (cont'd)												
				14	Laurel and Hardy	L		S?		Sp 73	14	R?
				15	Dracula the Bloodsucker	L		S?		Su 73	14	R?
				16	Espionage Spy Agency	L		S?		Su 73	14	P
				17	Kung Fu	L	C	S	3	7/73	14	P,V
				18	Jungle Boy	L		S?		7/73	14	R?
				19	Red Devils vs Kid From Ecuador	L	C	S?		Fa 73	14	P
				20	Trouble Man	L		S?		Fa-W 73	14/15	R?
				21	Bugs Bunny	DA	C	S		W 74	15	P
				22	Amazing Fighters	L		S?		Sp 74	15	R?
				23	La Boda (The Wedding)	L	C	S		Sp 74	15	P?
Orlando B	6/16/72	1963?	8/9?									
				1	Dracula Kills a Woman	L	C	S	4	Sp 72	9?	P,V
				2	Dracula & Frankenstein & his Wife	L		S?		1972	9?	P
				3	Cowboys and Indians	L		S?		1972	9?	P
				4	The Wicked Witch Dies	A		S?		1972	9?	P
				5	Tarzan and the Indians	L		S?			9?	R?
				6	Monsters Who Kill Snakes	CA	C	S				P
				7	Indians Who Have Tails	L	C	S	4	Su 73	10?	P,V
Ana C	6/17/71	12/ 1/62	8									
				1	The Girl Who Finds a Boyfriend	L	BW	S?	3	1971	9?	
Ana C (possibly same as above)												
				1	Man in the Jungle	DA	C?	S?			10/12	R?
Johnny C												
				1?	Cavemans	CA	C	SL			13?	R?
				2?	King Kong vs Godzilla	A		S			13?	
				3?	Caveman & Witch	L		S?			13?	P
				4?	Masked Marauder	L		S?			13?	R?
				5?	Superman	A		S?			13?	P
				6?	Story of the Mafia	A		S?			13?	R?
				7?	Destroy all Monsters	DA	C	S			13?	P
				8?	Starve the Rat	L		S?			13?	R?
Luis C												
				1	Cookieman and Hunchback	L		S?			10?	R?
Maria C	6/15/71	7/20/59	11?									
				1	The End of the World	A	C	S?	3	1971	13?	P
				2	The Picnic	L	BW	S	2	1971	13?	P,V
Maria C												
				1	The Lost Girl	L	BW	S	2	1973	7/8	P,V

APPENDIX A (cont'd)

Film Maker	Registration Date	Date of Birth	Age at Regis.							
Seq #	Film Title			Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
Carlos C	6/23/72	5/13/60	12							
1	Wolfman Meets Frankenstein			L	BW	S?		1972	11	
2?	Frankenstein			L		S?		6/72	12	R?
3?	Frankenstein Kills Dracula			L		S?		1972?	12	R?
4?	Frankenstein & Dracula Kill Two Boys			L	BW	S?		1972?	12	R?
5?	Crooks Kill the FBI			L		S?				R?
6?	A Man Drinks a Powder and Gets Crazy			LA		S?				P?
7?	Bad Giant			A		S?				R?
8?	Lucha Libra			L		S?				R?
9?	Trouble Man is his Name			L		S?				R?
10?	Two Strange Indians			L		S?				R?
11?	Two Crazy Karate Guys			LA		S?				R?
Xavier C										
1	Bad Cowboy			L		S?			9?	R?
Minerva C	12/ 9/71	2/ 4/62	9							
1	School Fight			L	C	S?	3		9?	
	The Girl Who Found the Key			CA	C	S?	2	1972	10	
	Willie Could Not Whistle			L?		S?			10?	P?
Jose Luis C	9/14/70	12/24/59	11							
	The Two Robbers			L	C	N	3	1970	11	
	Two Toughs			L	C	S?	4	1970	11	P
3?	The Dracula			L		S?				R?
Daniel D										
1	A Robber Robs a Bank			A	C	S?	2	1971	11?	R?
Elizabeth D	9/15/70									
1?	Swimming in the Pool			L	C	S?	3	1970	9?	R?
2?	The Indian Robbers			L	C	S?	3	1970	10?	R?
Rosa D										
1	Running Girls			L	C	S?	3	1969	12?	R?
Alejandro F (possibly Fernando A)										
	The Devil's Son					S?			13?	R?
	West Side Story					S?			13?	P?
Marco F		5/ 2/60								
1	Spiderman			L		S?		Su 72	12	P

APPENDIX A (cont'd)

Film Maker	Seq #	Film Title	Registration Date	Date of Birth	Age at Regis.	Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location
Carlos G												
	1	Wrestling						S?			11?	R?
Victor G												
	1	The Great Hold-Up				L	C	S?	3	1970	15?	
Margarita H			9/24/71?	8/17/62 or 8/24/64?	9?							
	1	Dracula Story				L	C	S	3½	12/71	9-4?	P,V
	2	The Queen				L		S?		2/72	9-6?	P
	3	The Ghost and the People				A		S?		4/72	9-8?	P
	4	Ben				DA	C	S		4/72	9-8?	P
	5	Frosty the Cat				L		S?		5/72	9-9?	P
	6	Pony Race				A	C	S		Fa 72	10?	P
	7	I Dream of Jeannie				LA	C	PS	4	Su 73	10-10?	P,V
	8	Bugs Bunny				DA	C	S			11?	R?
Sonia H			9/24/71?	8/24/61?	10?							
	1?	Poor Soul						S?			10?	R?
	2?	The Creeper				L	C	S	2½	Fa 71?	10?	P,V
	3?	The Little Witch				A		S?			10?	R?
	4	The Phantom Cat				L		S?		4/72	10-8?	R?
	5	Rodan				A	C	S		10/72	11-1?	P
	6	Devil Woman				L		S?		Sp 73	11?	R?
	7	Baron Blood				L	C	PS	5	Su 73	11½?	P,V
Rafael J				9/14/58								
	1	Peter and the Wolf				L	C	S?	3	1971	12?	P
Kimberly J			1/ 8/72	3/28/59	12							
	1	The Girl Who Made a Friend				L		S?			12?	R?
Mary L												
	1	Mary's First Friend				L	C	N	4	1969	13?	P,V
	2	Mary and Her Two Sons				L	C	S?	9	1970	14?	P
Carmelo M												
		Bank Robber				L		S?			11?	R?
		Girl Who Got Killed				A		S?			11?	R?
Hector M												
	1	The Bad Man				L		S?			12?	P?
Manuel M			6/ 7/72?	12/12/62?	9?							
	1	The Monster Frankenstein										R?

APPENDIX A (cont'd)

Film Maker	Seq #	Film Title	Registration Date	Date of Birth	Age at Regis.	Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
Angel M			5/11/72	10/28/61	10							
	1	Boxing				L	C	S	3		10?	P,V
Maggie M			9/15/70	9/26/60	10?							
	1	A Girl Who Dreams About Caspar				A	C	S?	2	1970	12?	P
Manuel M												
	1	Lady Who Kills				L?		S?			10?	R?
Harry N			12/ 1/71	5/18/64?	7?							
	1	Vampire Who Hide in a Tree				L	C	S	3	1/72	7?	P,V
Nelly N												
	1?	Vampire Kills Boy				L?		S?		12/70	8?	P
	2?	Good Queen, Bad Queen				L?		S?		3/71	8/9	R?
	3?	A Man Who Wants to Kill a Girl				L?		S?			9?	R?
Salvatore O												
		Jesus Movie				L	C	S?	3	1971	11?	
		Miss America				L	C	S?	3	1971	11?	R?
		Superman				L?	C	S?	3	1971	11?	
Gabriel R												
	1	Three Karate Guys				L		S?		1973?	13?	R?
	2	The Boy Who Came from Puerto Rico				L		S?		1974?	13?	P
	3	Pot Smoker in N.Y.				L		S?		1974	13?	P
Jose R												
	1	Poison Alligators				A	C?	S?			9?	P
Awilda R			1/14/72	5/29/63	8							
	1	The Class Fight				L	C	S?	3	1972	9?	
Hiram R												
	1	About a Crime				L	BW	S?	5	1972	9?	
Johnny R												
		Drug Addict				L	C	S?	2	1969	12?	
		Indian Robbers (w/ Elizabeth D?)						S?				R?
		The Smoke of Pot				L	C	S?	8	1969	12?	
		The Two Young Rascals				L	C	S?	3	1969	12?	R?
		The Young Rascals (possibly same)				L?	C	S?	3	1969	12?	
Luis R			6/10/72	7/30/60	11							
	1	The Rotten Crooks				L		S?			11?	R?
	2	The FBI Kills the Crooks				L		S?			11/12	P
	3	Cowboys and Indians				L		S?			11/12	R?

APPENDIX A (cont'd)

Film Maker	Seq #	Film Title	Registration Date	Date of Birth	Age at Regis.	Type[a]	Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
Luis R			9/14/70	3/28/58	12					
		The Impossible Boys				L C S?	2	1969	11	R?
		The Impossible Ghost				L BW S?	9	1969	11	R?
	3?	Young Killers				L? C S?	3	1970	11?	R?
Miguel R										
		The Boy Who Got Hurt				L C S?	6	1970	9?	R?
		The Murderer Who Steals Jewels				L C S?	9	1970	9?	R?
		The Girl Who Had a Bad Dream				S?		1970	9?	
		Woman Who Has a Bad Dream (possibly same as above)				L C S?	6	1970	9/10	
		The Three Girls				L C S?	3	1970	9?	
		Three Girls Who Die (possibly same as above)				L C S?	3	1970	9?	R?
		Girl Who Hits a Boy				A C N	2	1970	9?	
		A Giant Who Wants Children				A C S?	2	1970	9?	
		Girl Who Wants Children (possibly same as above)				S?				R?
		The Girl Who Comes to Life				L C S?	6	1971	10?	R?
		The Bad Woman, Bad Man, and Bad Girl				A C S?	2	1971	10?	
		Boy and Girl Story				A C S?	3	1971	10?	R?
		Boy Who Turns Into a Bear				A C S?	2	1971	10?	
		The Girl Who Had a Fight				A C S?	2	1971	10?	R?
		A Witch Who Takes a Girl				A C S?	2	1971	10?	R?
		Boy Who Looks for a Fight (w/ Amparito T?)				L? C? S?	3?	1971?	10?	P?
		Two Sisters Who Had a Fight				L C S?	6	1971	11?	
		Priest Who Kill 4 Girls & Himself				L BW S?	6	1972	11?	
		The Ballerina				S?			11/12?	R?
		Girl Who Gets Hurt				S?				R?
		The Good Queen				S?				R?
		The Lady Who Has a Baby				S?				R?
Robert R			9/14/70	2/11/57?	13?					
	1?	FBI				L BW S?	6	1970	10?	
		Bowery Bums				L C S?	6	1970		
		A Drug Addict Loses the Fight				L S?	4	1970	11?	R?
		FBI Meet the Crooks				L BW S?	3	1970	11?	
		The Indian Fight				L C S?	15	1970	11?	
	6?	Basketball Film				L BW N	6	1971	12?	
Miriam R			1/20/72	5/ 9/60	11					
	1	Marriage				L C S?	3	1972	11	
Manuel R										
	1	Danger in the City				L C S?	5	1970	13?	R?

APPENDIX A (cont'd)

Film Maker / Seq #	Film Title	Registration Date	Date of Birth	Age at Regis.	Type[a]	Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
Carmen R			4/17/59						
1?	Boy Who Loves a Girl				L C N	3	1970	11	
2?	The Murder				L C? S	2	11/70	11	P,V
3	Two Girls				L C S?	8	1970?	12?	R?
4	The Three Girls				L C S?	4	1970?	12?	R?
5	Marriage Movie				L BW S	8½	8/71	12	P,V
Edwin R			12/ 6/63						
1	House of Vampires				L C N?	2	2/71	7?	P,V
2	Tough Guys--Cowboys				L BW S?	6?	5/71	7?	P
3?	The Boy Who Kills People But Not So Much				L C S?	3	1970?	7?	
4?	The Man Who Kills People But Not So Much (possibly same as above)				L C S?	3	1971	7?	R?
5?	The End of the World				L C S	4	9/71	7?	P,V
6?	Story of the Boy				A S?		11/71	7?	P
Richard R			6/ 4/60						
1	Cow Robbers				L C S	2	1970	10	P,V
2	Cowboys and Bad Indians				L C S?	3	1971	10	R?
3	Bad Dragon				A C S?	3	1971	10	
4	The Monster in Central Park				L C SL?	2½	1971	11	P,V
Ana R		6/ 7/72	8/26/64	7					
1	The Werewolf				L S?			9?	R?
Jose R		6/ 7/72	10/12/63	8					
1?	Frankenstein & Dracula Kill the Men				L S?			10?	R?
	Lucas McCan				L S?			10?	R?
	Woman Who Tries to Poison Her Son				L S?			10?	R?
Rose Marie R		7/31/72	1/23/59	13					
1	Hungry Monster				L C S	3	5/72	13	P,V
2	Crazy Doctor				L S?		11/72	13	P
3	Baby Sitter				L S?		1/73	14	P
4	Teenage Werewolf Dies Again				L C S	4	5/73	14	P,V
5	Marriage Movie				L S?			14?	P
Joseph R		4/ 5/72	1/ 6/60	12					
1	Monster Turtle				L S?		5/72	12?	R?
2	Godzilla vs King Kong				A S?		6/72	12?	P
Elizabeth R		1/18/72	5/ 3/60	11					
1	New Girl Stole Our Boy				L S?		1/72	11?	P

APPENDIX A (cont'd)

Film Maker	Registration Date	Date of Birth	Age at Regis.	Seq #	Film Title	Type[a]	Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
Carol S	10/15/70	12/24/60	9							
				1	Friends	L C S	1½	11/70	9	P,V
				2	Girl Who Goes to Puerto Rico	L C S?	3	3/71	10	R?
				3	The Girl Who Goes to the Park	L C S?	3	1971	10	
				4	The Monster Who Eats People	A C S?	3	11/71	10	P
				5	Three Girls Who Get Killed	L C S	3½	5/72?	11?	P,V
				6	The Girl Who Robs Candy	L S?		5/73	12	P?
				7	Roach Killer Shoes	L C S	5	5/74	13	P,V
Alberto S	9/16/70									
					The Old Woman Who Likes to Kill People	L C S?	3	1970	11?	R?
					A Woman Who Sends a Boy to Kill People	L C S?	6	1970	11?	
					Night of the Two Vampires (w/ Amparito T)	L BW S?	9	1970	11?	R?
					Car Hits a Woman	A C N	2	1970	11?	
					Woman Who Had a Bad Dream	A C S?	3	1970	11?	
					Dracula and Two Dead Women	L BW S?	9	1971	12?	P
					A Woman Who Takes Another Woman's Boyfriend Away	L BW S?	6	1971	12?	R?
					A Woman Who Hates Her Own Son	A C S?	6	1971	12?	R?
					Boy Who Gets Kidnapped					
					A Boy Who Gets Hippies	L? S?				R?
					Dracula Hypnotizes a Girl	L? S?				P?
					Good Giant Saves Little People	S?				R?
					A Woman Who Kills a Girl and her Mother	L? S?				R?
Miriam S	9/16/70									
				1	When the Sun Comes Up	L BW S?	12	1969	11?	
Amparito T	9/14/70	9/14/61?	9							
				1?	Night of Two Vampires (w/ Alberto S)	L BW S?	9	1970	9?	R?
					Boy Who Looks for a Fight	L C N	3	1971	10?	
					The Girl Who Looks for a Fight	L C S?	3	1971?	10?	
					Frankenstein Meets a Girl	A C S?	3	1971	10?	R?
					A Girl Who Falls in Love	A C S?	3	1971	10?	P
Tony C										
				1	The Drug Addicts	L? S?			13?	P?
Nicholas										
				1	Nick's Film	L C N	4	1970		

APPENDIX A (cont'd)

PART II: FALL 1974 THROUGH SPRING 1976

ID #	Film Maker	Registration Date	Date of Birth	Age at Regis.					
	Seq #	Film Title or Description			Type[a]	Length[b] (Min.)	Date Made	Age of Maker	Current Location
6	Elizabeth B	9/29/75	1/24/62	13-8					
	1	Film Task Film			L C N	2½	10/75	13-8	L
	2	Practice Animation			CA BW N DA		10/75	13-8	P
	3	What I Would Like to Have in My Zoo			PA C SL?		10/75-1/76	13	P,R
	4	The Cookie Show			L C S	3	11/75-2/76	13	P,R,
11	Elaine C	10/21/74?	10/25/62	11-11					
	1	Practice Animation			A BW? N		Fa 74	11-11?	P
	2	Sports			PA C SL?		W 74-75	12	P,R
	3	Desperate Girl			L C SL	2½	W 74-75	12	P,R,
	4	Great Masks			PA C N?		3/75	12-4	P,R
12	Michelle C	2/20/75	9/10/61	13-5					
	1	Practice Animation			PA BW? N		2-3/75	13-5	V
	2	Live Practice			L BW? N		2-3/75	13-5	V
13	Danny D	9/25/75	10/12/62	12-11					
	1	Practice Animation			CA BW? N DA		10/75	12-11	P,V
	2	Film Task Films (2)			L C N	2½	10/75	12-11	P,L
	3	Photo Animations (2)			PA BW N		10/75	13-0	P,V
	4	Live Practice			L BW N		11/75	13-0	P,V
	5	Live Exercise			L C N		11/75	13-1	P,V
	6	The Fighting Magician			LA C SL?		11/75-2/76	13	P,R,
	7	The War of the Godzillas			OA C S?	nf	12/75-1/76	13	L
	8	The Man Who Always Gets His Way			CA C S		2-4/76	13	P,R,
	9	Death of the Magician			LA C SL?		1-6/76	13	P,R
	10	Shadows (w/ David M)			LA BW? N		5/76	13	L
	11	Film Task Film			L C N		5/76	13-4	P
	12	Destroy Monsters Destroy			CA C S OA		5-6/76	13	P,R,
15	Jon D	10/28/74?	5/14/63	11-5					
	1	Practice Animations (2)			DA BW N OA LA		11/74?	11-5	P
	2	Sleetcliff I			DA C S		11/75	11-5	P,R
	3	Channel 6 News I			L C S	½	11/74	11-5	P,R,

APPENDIX A (cont'd)

ID #	Film Maker	Registration Date	Date of Birth	Age at Regis.	Seq #	Film Title or Description	Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
	Jon D (cont'd)												
					4	Channel 6 News II	L	C	N	nf	11/74	11-5	P
					5	Sleetcliff II	DA L	C	S		11/74- 1/75	11	P,R
					6	The Magic Show	OA	C	S		11/74- 1/75	11	P,R
					7	What to Do if Your Dog Breaks Down	L DA	C	S		1/75	11-7	P,R
					8	Photo Animation	PA	C	N		1/75	11-8	P
					9	3 Short Scenes (The Magic Stick)	LA	BW	N	2nf	2/75	11-9	P,V
16	Julio D	2/13/76	11/23/62	13-2									
					1	The Castle	DA	C	N	nf	2/76	13-2	P?
					2	Film Task Film	L	C	N	2½	3/76	13-3	P
17	Nathaniel D	11/ /74	11/ 8/61	13-0?									
					1	IVD Evening News (w/ John D)	L	C	S		5-6/75	13-6	L
18	Albert F	1/24/75	2/27/62	12-11									
					1	Snakes	PA	BW?	N		1/75	12-11	P
					2	Star Trek	PA	BW?	N	nf	2-3/75	13-0	P?
19	Eliot F	1/22/76	5/ 7/60	15-8									
					1	Live Practice	L		N		2/76	15-9	L
					2	Film Task Film	L	C	N	2½	2/76	15-9	P
					3	The Playful Phantoms	LA	C	N	7	2-6/76	15/16	P,R,V
20	Marco F	Sp 72?	5/ 2/60	12?									
					3	King Kong vs the Praying Mantis	CA	C	S		5-9/75	15	P,R
					4	My Favorite Things	PA L	C	S		10/75- 3/76	15	P,R,V
					5	Live Exercise	L	C	N		11/75	15-6	P
					6	The Golden Dragon's Revenge	L	C	S		5-6/76	16	R,V
23	Jose G	10/ 8/75	12/23/60	14-9									
					1	Practice Animation	A		N		10/75	14-9	L
24	Steven G	10/ 1/75	8/24/62	13-1									
					1	Film Task Film	L	C	N	2½	10/75	13-1	P
					2	Practice Animation	CA	BW?	N		10/75	13-1	P?
	Muffin H	10/25/74?		12/13									
					1	Practice Animation	DA	BW?	N		10/74		P?
					2	Photo Animation	PA		N	nf	11/74		V

APPENDIX A (cont'd)

ID #	Film Maker	Seq #	Film Title or Description	Registration Date	Date of Birth	Age at Regis.	Type[a]	Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
28	Darlene H			11/ 3/75	5/10/63	12-5					
		1	Practice Animation				DA BW? N		11/75	12-6	P?
		2	Film Task Film				L C N	2½	11/75	12-6	P
		3	Dizzy Designs				DA C N	nf	11/75	12-6	L
30	William I			2/18/75	5/ 6/61	13-9					
		1	Live Practice				L N		3/75	13-9	V
31	Carl J			11/ 7/74		13					
		1	Bagful of Sorrow				L BW S	4	11-12/74	13	P,R,
		2	Money Isn't Everything				L BW? S		1-3/75	13	P,R?
34	David L			12/ /74?	6/11/60	14-5					
		1	A Night of TV Watching				L BW S	4	12/74-1/75	14-6	P,R,
		2	A Day in the Life				L C S		1-3/75	14	P,R
		3	Uh, Oh 7				L C N	nf	3-4/75	14	P?
		4	Sam Splatterblatter				L C? N	nf	4/75	14-10	L
36	Jimmy L			1/16/75	7/30/62	12-5					
		1	Live Practice (w/ David M)				L BW? N		1/75	12-5	V
		2	The Detective (w/ David M)				L BW S	8	1-3/75	12	P,R,
		3	Live Practice (w/ others) and The Capricorn Dies Hard (w/ Sid M)				LA BW? N		2,3/75	12	V,L
		4	Films of Horror				PA BW N		4/75	12-8	P,R?
		5	The Magician				LA?BW N?	nf?	4-5/75	12	P,R
38	Sid M			1/16/75	1/18/66	8-11					
		1	Practice Animation				PA BW? N		1/75	9-0	V
		2	Animal World				PA C? N		2-3/75	9-1	V
		3	The Capricorn Dies Hard (w/ Jimmy L)				L N	nf	3/75	9-1	L
		4	Chinese Hercules				PA C N	nf	4/75	9-2	P
		5	Film Task Film				L C N		10/76	10-10	P
39	Victor M			11/ 1/74?	10/11/59	15-0					
		1	Faces				PA C N?		12/75	15-1	P,R
		2	The Briefcase				L BW N	nf	1-4/75	15	P
		3	Graffitti				L N	nf	4/75	15-7	L
42	David M			1/ 8/75	12/ 3/62	12-1					
		1	Live Practice (w/ Jimmy L)				L BW? N		1/75	12-1	V
		2	Practice Animation				DA C N		1/75	12-1	P
		3	The Detective (w/ Jimmy L)				L BW S	8	1-3/75	12	P,R,
		4	Live Practice (w/ others) and The Magic Stick (w/ Jon D) and other work				LA BW? N		2-3/75	12-2	V

APPENDIX A (cont'd)

ID #	Film Maker	Registration Date	Date of Birth	Age at Regis.					
	Seq #	Film Title or Description		Type[a]		Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
	David M (cont'd)								
	5	Twin Magic		LA C S		6	4-5/75	12	P,R,V
	6	Photo Animation		PA N			6/75	12-6	L
	7	The Wizard		LA C S			12/75-2/76	13	P,R,V
	8	The Boy No One Knew		L C N		nf	1-5/76	13	L
	9	Shadows (w/ Danny D)		LA BW? N			5/76	13-5	L
	10	The Bionic Kid		LA C S		5½	3-6/76	13	P,R,V
	11	Film Task Film		L C N		2½	8/76	13-8	L
	Hector M	5/ /75?		14?					
	3?	The Night Gambler		L C S			2/76	15?	P,R
	4?	Treasure of the Philippines?		L C? N?		nf	4-6/76?	15?	L
	5?	Tropical Tiger		L C? N		nf	5-6/76	15?	L
43	Michael M	1/22/76?	3/27/63	12-9					
	1	Practice Animation		DA N			1/76	12-10	L
	2	Film Task Film		L C N		2½	7/76	13-3	P
44	Robin M	10/21/74?		12?					
	1	Practice Animation		CA C N		2	10-11/74	12?	V
	2?	Men at War		PA C SL?			11/74	12?	P,R
	3?	Interview Movie		L BW?PS			11/74-1/75	12?	P,R
	4?	Practice Pixilation (w/ others)		LA BW N			11-12/74?	12?	P
	5	Jackie and the Devil (w/others)		L BW N		nf?	12/74	12?	P,R
	William M	11/13/74?		14?					
	1	Practice Animation		CA C? N			11/74	14?	L?
45	Jose M	11/ 6/74?	6/27/59	15-4					
	1	Practice Animation		DA BW? N			11/74	15-4	P
	2	A Friend in Need		L BW S		7	11/74-6/75	15	P,R,V
	3	A Teenager in Trouble		L C? N		nf	1-2/75	15	L
	4	Feve[illegible]		L C N		nf	3-5/75	15	P?
47	John N	4/ 7/75?	1/25/63	12-2					
	1	The Addict		L C S		5	4-5/75	12	P,R,V
	2	Return to the Days of Old (w/ Carlos V)		LA BW SL?		2½	5-6/75	12	P,R
	3	Clay Animation		CA C N		nf	6/75?	12	L
	4	Live Practice (16mm)		L BW N			1/76	12-11	L

APPENDIX A (cont'd)

ID #	Film Maker	Seq #	Film Title or Description	Registration Date	Date of Birth	Age at Regis.	Type[a]	Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
48	Eddie N			1/13/75	2/13/61	13-11					
		1	Practice Animation				DA BW? N		1/75	13-11	P
		2	Horror Animation				PA BW? N		1/75	13-11	P
		3	Star Trek				PA BW? N		1/75	13-11	P
		4	Cars				PA BW N	nf	1-2/75	13-11	P
49	George N			11/13/74?	11/21/59	14-11					
		1	Photo Animation				PA C S		11-12/74	14-0	P,R?
		2	The $6000 Phone Call (w/Gilbert N)				L C N?		12/74	14-0	P,R?
		3	Stop Before Starting				L C S	11	12/74- 4/75	14	P,R,V
		4	Things Out of the . . .				PA C N		1-2/75	14-2	P
		5	Two Character Exercises				L C N		2-6/75	14-3	P,R
		6	I Can't Get Started (Take to the Altar and Run)				L C S		2/75- 6/76	14/15	P,R
		7	Nationalist Day				L C? N	nf	10-11/75	14-11	L
		8	Animation and Camera Exercises				L,A C N		Fa 75	14	P
		9	Experimental Film (16mm)				L BW N		1-3/76?	15	P
		10	Why? (16mm)				LA BW S	4½	1-6/76	15	P,R,V
83	Gilbert N			10/21/74?	9/24/62	12-0					
		1	Practice Animation				DA C? N		10-11/74	12-1	P?
		2?	Birds				PA C S		11-12/74	12	P,R
		3?	Airplane Animation				DA N		12/74	12-2	L?
		4?	Practice Pixilation (w/ others)				LA BW N		12/74?	12-2?	P
		5?	Jackie and the Devil (w/ others)				L BW N	nf?	12/74	12-2	P,R
		6?	The $6000 Phone Call (w/George N)				L C N?	nf?	12/74- 1/75?	12	P,R?
51	Hector P			3/ 4/75?	2/ 1/62	13-1					
		1	Live Practice				L N		3/75	13-1	V
		2	Practice Animation				CA N		3/75	13-1	V
		3	Harold Lloyd				PA BW S?		3-5/75?	13	P,R
		4	Abstract Animation				A N		6/75	13-4	L
52	Jaime R			1/16/75	11/17/61	13-2					
		1	Live Practices and The Detective (w/ others)				L BW		1-3/75	13	P,V
		2	Skeleton Animation				DA BW? N		2/75	13-3	V
		3	The Masters				CA C N	nf	3/75	13-3	P
54	Jimmy R			1/15/75	4/21/62	12-8					
		1	Practice Animation				DA BW? N		1/75	12-8	P
		2	Pictures of Horror				PA C? N		1/75	12-9	P
57	Angel R			3/ 5/76	6/30/62	13-8					
		1	Lost Saucer				DA C N		3-4/76	13-8	L

APPENDIX A (cont'd)

ID #	Film Maker	Seq #	Film Title or Description	Registration Date	Date of Birth	Age at Regis.	Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location
58	Edwin R			2/24/75?	11/18/60	14-3							
		1	Live Practice (w/ Raymond V)				L		N		3/75	14-3	V
		2	Practice Animation (w/ Raymond V)				DA		N		3/75	14-3	V
59	Ruth R			10/21/74?	6/ 9/61	13-4							
		1	Practice Animation				DA?		N?		10/74?	13-4	L
		2	Masks That People Wear				PA	C	S		11/74- 1/75	13	P,R
60	Ulises (Willy) R			1/28/75?	5/24/62	12-8							
		1	Practice Animation				DA		N		1/75	12-8	L?
62	Steven R			1/1[illegible]?	8/29/63	12-4							
		1	Practice Animation				DA		N		1/76	12-4	L
	Nelson R			3/ 6/75?									
		1	Live Practice and Animation				L,A		N		3/75		L
66	Richard S			10/27/75?	7/18/61	14-3							
		1	Film Task Film				L	C	N	2½	10/75	14-3	P
		2	Practice Animation				DA CA	C?	N		10-11/75	14-3	L
		3	Live Practice				L	C	N		11/75	14-3	P
		4	Doc Savage				PA	C	N		11/75	14	P
		5	Live Exercise				L	C	N		11/75	14-4	P
		6	Film Task Film				L	C	N	2½	7/76	15-0	P
	Gilberto (Jimmy) S			3/ /76?	6/14/62	13-8?							
		1?	The Deadly Three				L		S?		3-6/76	13	L
68	Nydia S			9/29/75	5/10/61	14-4							
		1	Film Task Film				L	C	N	2½	10/75	14-4	P
		2	Practice Animation				DA?		N		10/75	14-5	L
69	Dolores S			9/29/75	10/31/62	12-10							
		1	Film Task Film				L	C	N	2½	10/75	12-11	P
		2	Practice Animation				DA CA	BW	N		10/75	12-11	P
		3	Photo Animation				PA	C	S		10/75- 5/76	13	P,R
		4	The Candy Show				L	C	N	nf	11/75- 5/76	13	P
		5	Film Task Film				L	C	N	2½	3/76	13-4	P
	Danny S			10/30/74?		12?							
		1	Practice Animation				DA?		N		10-11/74	12?	L?
		2	Interview Movie (w/ Robin M)				L	BW	PS		11/74	12?	P,R
		3	Airport 1976				DA	BW?	N		12/74	12?	P

APPENDIX A (cont'd)

ID #	Film Maker	Seq #	Film Title or Description	Registration Date	Date of Birth	Age at Regis.	Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
70	Bruce S			2/20/75?	4/20/61	13-10							
		1	Strange Things				LA	C	N?	nf?	2-3/75	13-10	P
71	Edwin S			2/11/75?	5/ 4/61	13-9							
		1	Live Practice				L		N		2-3/75	13-9	V
		2	Practice Animation				DA?		N		2-3/75	13-9	V
72	Matthew S			10/30/74?	5/ 6/64	10-5							
		1	Practice Animation				LA DA	BW	N		10-11/74	10-5	P
		2	Woodsome Schnook				DA OA	BW	S?		11-12/74	10-6	P
		3	Photo Animation				PA	C	N	nf	1/75	10-8	P
		4	Live Practice				L	C	N		1/75	10-8	P
	Julius V			10/21/74?		12?							
		1?	Practice Animation?				A		N		10/74?	12?	L
		2?	From 10th Street to the Moon				PA	BW	S		11/74	12?	P,R
74	Carlos V			1/22/75?	4/30/61	13-7							
		1	Wrong Way to Make a Movie (w/ Eddie W)				L	BW	S	4	1-4/75	13	P,R,V
		2	Photo Animation				PA		N		3/75	13-9	L
		3	It (w/ Eddie W and R V)				L DA	BW	S	10	3-5/75	13	P,R,V
		4	Return to the Days of Old (w/ John N)				LA	BW	SL?	2½	5/75	14-0	P,R
		5	Experimental Animation				A		N	nf?	1/76	14-7	L
		6	The Return of It				L		N	nf	5/75-4/76	14	L
		7	Film Task Film				L	C	N	2½	6/76	15-1	P
76	Raymond V			3/ 3/75?	6/ 5/61	13-8							
		1	Live Practice (w/ Edwin R)				L		N		3/75	13-8	V
		2	Practice Animation (W/ Edwin R)				DA		N		3/75	13-8	V
77	Peter V			2/20/76?	9/15/63	12-5							
		1	The Horse and the Man (sound provided by teacher)				CA	C	S		3-4/76	12-6	P,R
		2	Film Task Film				L	C	N	2½	4/76	12-7	P
	Anthony V			12/ /74?	3/29/60	14-8?							
		1	Live Practice				L		N		1/75?	14-9	L
		2?	The Big Three (w/ Paul V)				L	C?	N	nf	3/75-2/76?	14-15	L

APPENDIX A (cont'd)

ID #	Film Maker	Seq #	Registration Date	Date of Birth	Age at Regis.	Film Title or Description	Type[a]			Length[b] (Min.)	Date Made	Age of Maker	Current Location[c]
78	Paul V		11/ 74	3/21/59	15-7?								
		1				Time	L	C	S	16	12/74-6/75	15	P,R,V
		2				The Bombs, Part 1	L	C	S		3/75-6/76?	15-17	V
		3				Blackbird I	L	C	N	nf	6-12/75?	16	L
		4				The Bombs, Part 2	L	C	S		1-6/76?	16-17	V
		5				Blackbird II (script same as 3)	L	C	N	nf	6/76	17-2	L
		6				Film Task Film	L	C	N	2½	10/76	17-6	P
81	Anthony W		1/16/75	9/10/62	12-4								
		1				Car Animation	OA		N	nf	3/75	12-5	L
		2				The Troublemaker	L	BW?	N	nf	3-5/75	12	P?
		3				Revenge	L		N	nf	1-2/76	13-4	L
82	Eddie W		1/22/75?	5/ 7/61	13-8								
		1				Wrong Way to Make a Movie (w/ Carlos V)	L	BW	S	4	1-4/75	13	P,R,
		2				It (w/ Carlos V and R V)	L	BW	S	10	2-3/75	13-9	P,R,
		3				The Deadly Pickle	L	C?	N	nf	10-12/75?	14	L
	Caleb B		10/ /75										
		1				Untitled			N		10/75?		P?
	Ching C		12/ /74?										
		L				The Operation	L		N	nf	1/75?		P?
	Carlos C		6/ /72?	5/13/60	12								
		12?				Photo Animation	PA	C	N		1/75?	14-8?	P
	Todd D		10/21/74?		13?								
		1				Practice Animation	DA	BW	N		10/74?	13?	P
27	Fred G		1/14/75	4/30/59	15-8								
		1				Live Practice	L		N		1/75	15-8	L?
	Hal		12/11/74?		13?								
		1				Practice Film			N		12/74	13?	L
	Kevin		11/19/74?		13?								
		1				Karate Fever			N	nf?	12/74?	13?	L

APPENDIX A (cont'd)

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[a] Column 1:
A = Animated film of unknown type.
CA = Three-dimensional animation using clay figures.
DA = Two-dimensional animation with drawn and cut-out figures and backgroun
L = Live action film.
LA = Live action film using animation or other special camera techniques (stop-action, pixilation, reversed action).
OA = Three-dimensional animation using either full-size or miniature objects not created by the filmmaker.
PA = Two-dimensional animation made with photos or drawings not produced by the animator.

Column 2:
BW = Black and white film.
C = Color film.

Column 3:
N = Sound was not recorded on this film.
PS = Sound was recorded on only part of this film.
S = Sound film.
SL = Sound was recorded but all sound prints have been lost.

[b] nf = This film was never finished through filming was begun.

[c] L = All known copies of this film have been lost or are the property of the filmmaker.
P = A copy is at the University of Pennsylvania.
R = A copy is at the Young Filmakers offices in New York.
V = A copy has been recorded on videotape.

Note--. For all columns, ? indicates that the preceding data may not be accurate.